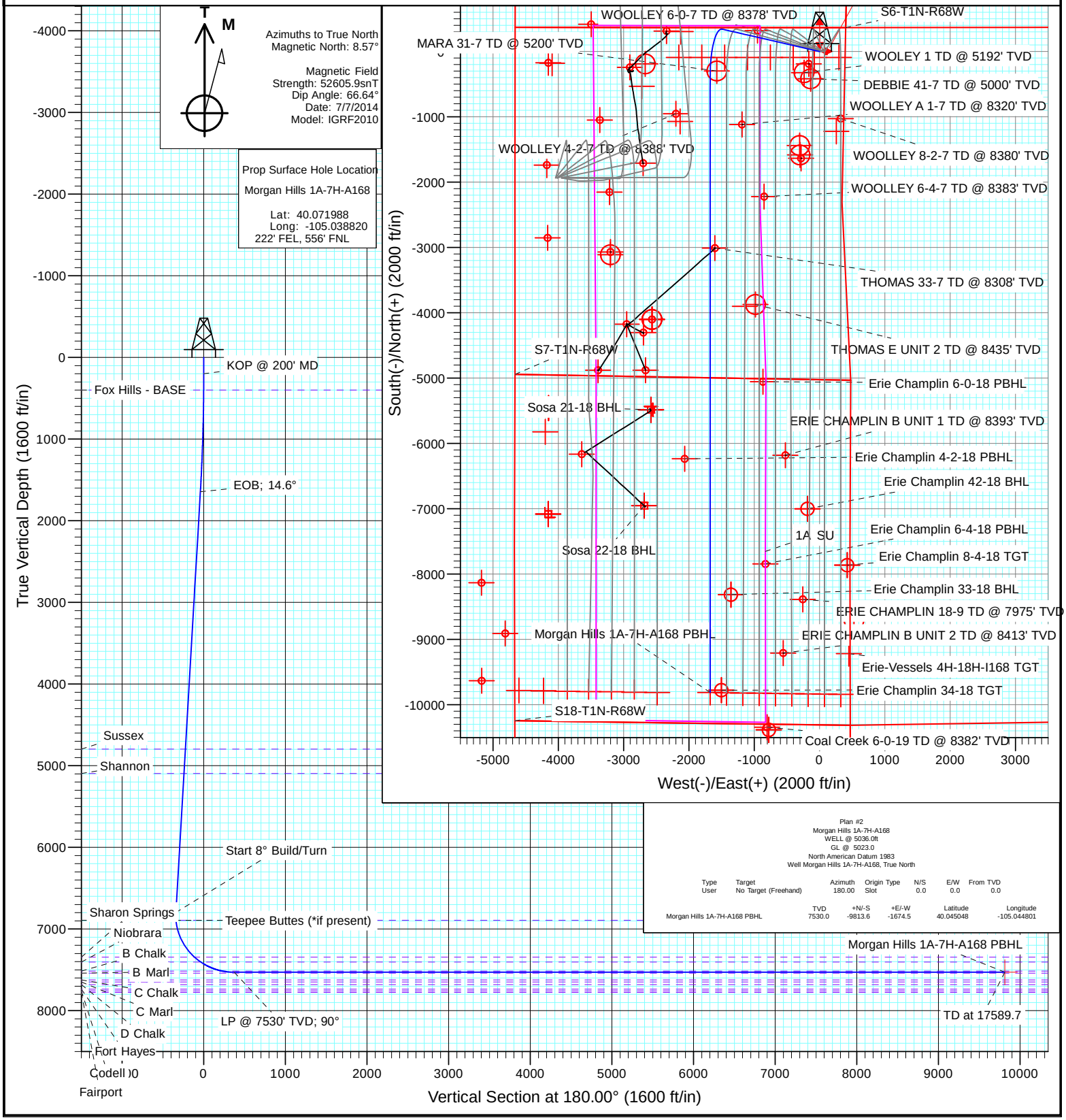
encana natural gas

Project: DJ Wattenberg
Site: S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)
Well: Morgan Hills 1A-7H-A168
Wellbore: HZ
Design: Plan #2

CATHEDRAL

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target	Annotation
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0		
2	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0		KOP @ 200' MD
3	1659.9	14.60	282.92	1644.1	41.4	-180.3	1.00	282.92	-41.4		EOB; 14.6°
4	6984.3	14.60	282.92	6796.7	341.5	-1488.3	0.00	0.00	-341.5		Start 8° Build/Turn
5	8149.7	90.00	180.00	7530.0	-373.6	-1674.5	8.00	-102.52	373.6		LP @ 7530' TVD; 90°
6	17589.7	90.00	180.00	7530.0	-9813.6	-1674.5	0.00	0.00	9813.6	Morgan Hills 1A-7H-A168 PBHL	TD at 17589.7



Planning Report

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	WELL @ 5036.0ft
Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5036.0ft
Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**North Reference:**	True
Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

Project	DJ Wattenberg		
Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)				
Site Position:		**Northing:**	1,265,219.42 ft	**Latitude:**	40.060530
From:	Lat/Long	**Easting:**	3,126,139.27 ft	**Longitude:**	-105.049370
Position Uncertainty:	0.0 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	0.29 °

Well	Morgan Hills 1A-7H-A168				
Well Position	**+N/-S**	0.0 ft	**Northing:**	1,269,408.43 ft	**Latitude:**	40.071988
	+E/-W	0.0 ft	**Easting:**	3,129,070.53 ft	**Longitude:**	-105.038820
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	0.0 ft	**Ground Level:**	5,023.0 ft

Wellbore	HZ				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2010	7/7/2014	8.57	66.64	52,606

Design	Plan #2				
Audit Notes:					
Version:		**Phase:**	PLAN	**Tie On Depth:**	0.0
Vertical Section:	**Depth From (TVD) (ft)**	**+N/-S (ft)**	**+E/-W (ft)**	**Direction (°)**	
	0.0	0.0	0.0	180.00	

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,659.9	14.60	282.92	1,644.1	41.4	-180.3	1.00	1.00	0.00	282.92	
6,984.3	14.60	282.92	6,796.7	341.5	-1,488.3	0.00	0.00	0.00	0.00	
8,149.7	90.00	180.00	7,530.0	-373.6	-1,674.5	8.00	6.47	-8.83	-102.52	
17,589.7	90.00	180.00	7,530.0	-9,813.6	-1,674.5	0.00	0.00	0.00	0.00	Morgan Hills 1A-7H-A

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Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**North Reference:**	True
Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	KOP @ 200' MD
300.0	1.00	282.92	300.0	0.2	-0.9	-0.2	1.00	1.00	
400.0	2.00	282.92	400.0	0.8	-3.4	-0.8	1.00	1.00	Fox Hills - BASE
500.0	3.00	282.92	499.9	1.8	-7.7	-1.8	1.00	1.00	
600.0	4.00	282.92	599.7	3.1	-13.6	-3.1	1.00	1.00	
700.0	5.00	282.92	699.4	4.9	-21.3	-4.9	1.00	1.00	
800.0	6.00	282.92	798.9	7.0	-30.6	-7.0	1.00	1.00	
900.0	7.00	282.92	898.3	9.6	-41.6	-9.6	1.00	1.00	
1,000.0	8.00	282.92	997.4	12.5	-54.3	-12.5	1.00	1.00	
1,100.0	9.00	282.92	1,096.3	15.8	-68.8	-15.8	1.00	1.00	
1,200.0	10.00	282.92	1,194.9	19.5	-84.8	-19.5	1.00	1.00	
1,300.0	11.00	282.92	1,293.3	23.5	-102.6	-23.5	1.00	1.00	
1,400.0	12.00	282.92	1,391.2	28.0	-122.0	-28.0	1.00	1.00	
1,500.0	13.00	282.92	1,488.9	32.8	-143.1	-32.8	1.00	1.00	
1,600.0	14.00	282.92	1,586.1	38.1	-165.9	-38.1	1.00	1.00	
1,659.9	14.60	282.92	1,644.1	41.4	-180.3	-41.4	1.00	1.00	EOB; 14.6°
1,700.0	14.60	282.92	1,683.0	43.6	-190.2	-43.6	0.00	0.00	
1,800.0	14.60	282.92	1,779.7	49.3	-214.7	-49.3	0.00	0.00	
1,900.0	14.60	282.92	1,876.5	54.9	-239.3	-54.9	0.00	0.00	
2,000.0	14.60	282.92	1,973.3	60.5	-263.9	-60.5	0.00	0.00	
2,100.0	14.60	282.92	2,070.0	66.2	-288.4	-66.2	0.00	0.00	
2,200.0	14.60	282.92	2,166.8	71.8	-313.0	-71.8	0.00	0.00	
2,300.0	14.60	282.92	2,263.6	77.5	-337.6	-77.5	0.00	0.00	
2,400.0	14.60	282.92	2,360.4	83.1	-362.1	-83.1	0.00	0.00	
2,500.0	14.60	282.92	2,457.1	88.7	-386.7	-88.7	0.00	0.00	
2,600.0	14.60	282.92	2,553.9	94.4	-411.3	-94.4	0.00	0.00	
2,700.0	14.60	282.92	2,650.7	100.0	-435.8	-100.0	0.00	0.00	
2,800.0	14.60	282.92	2,747.4	105.6	-460.4	-105.6	0.00	0.00	
2,900.0	14.60	282.92	2,844.2	111.3	-485.0	-111.3	0.00	0.00	
3,000.0	14.60	282.92	2,941.0	116.9	-509.5	-116.9	0.00	0.00	
3,100.0	14.60	282.92	3,037.8	122.5	-534.1	-122.5	0.00	0.00	
3,200.0	14.60	282.92	3,134.5	128.2	-558.7	-128.2	0.00	0.00	
3,300.0	14.60	282.92	3,231.3	133.8	-583.2	-133.8	0.00	0.00	
3,400.0	14.60	282.92	3,328.1	139.5	-607.8	-139.5	0.00	0.00	
3,500.0	14.60	282.92	3,424.8	145.1	-632.4	-145.1	0.00	0.00	
3,600.0	14.60	282.92	3,521.6	150.7	-656.9	-150.7	0.00	0.00	
3,700.0	14.60	282.92	3,618.4	156.4	-681.5	-156.4	0.00	0.00	
3,800.0	14.60	282.92	3,715.2	162.0	-706.1	-162.0	0.00	0.00	
3,900.0	14.60	282.92	3,811.9	167.6	-730.6	-167.6	0.00	0.00	
4,000.0	14.60	282.92	3,908.7	173.3	-755.2	-173.3	0.00	0.00	
4,100.0	14.60	282.92	4,005.5	178.9	-779.8	-178.9	0.00	0.00	
4,200.0	14.60	282.92	4,102.2	184.6	-804.3	-184.6	0.00	0.00	
4,300.0	14.60	282.92	4,199.0	190.2	-828.9	-190.2	0.00	0.00	
4,400.0	14.60	282.92	4,295.8	195.8	-853.5	-195.8	0.00	0.00	
4,500.0	14.60	282.92	4,392.6	201.5	-878.0	-201.5	0.00	0.00	
4,600.0	14.60	282.92	4,489.3	207.1	-902.6	-207.1	0.00	0.00	
4,700.0	14.60	282.92	4,586.1	212.7	-927.2	-212.7	0.00	0.00	
4,800.0	14.60	282.92	4,682.9	218.4	-951.7	-218.4	0.00	0.00	
4,900.0	14.60	282.92	4,779.6	224.0	-976.3	-224.0	0.00	0.00	
4,916.9	14.60	282.92	4,796.0	225.0	-980.4	-225.0	0.00	0.00	Sussex

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Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
5,000.0	14.60	282.92	4,876.4	229.6	-1,000.9	-229.6	0.00	0.00	
5,100.0	14.60	282.92	4,973.2	235.3	-1,025.4	-235.3	0.00	0.00	
5,200.0	14.60	282.92	5,070.0	240.9	-1,050.0	-240.9	0.00	0.00	
5,226.9	14.60	282.92	5,096.0	242.4	-1,056.6	-242.4	0.00	0.00	Shannon
5,300.0	14.60	282.92	5,166.7	246.6	-1,074.6	-246.6	0.00	0.00	
5,400.0	14.60	282.92	5,263.5	252.2	-1,099.1	-252.2	0.00	0.00	
5,500.0	14.60	282.92	5,360.3	257.8	-1,123.7	-257.8	0.00	0.00	
5,600.0	14.60	282.92	5,457.0	263.5	-1,148.3	-263.5	0.00	0.00	
5,700.0	14.60	282.92	5,553.8	269.1	-1,172.8	-269.1	0.00	0.00	
5,800.0	14.60	282.92	5,650.6	274.7	-1,197.4	-274.7	0.00	0.00	
5,900.0	14.60	282.92	5,747.4	280.4	-1,222.0	-280.4	0.00	0.00	
6,000.0	14.60	282.92	5,844.1	286.0	-1,246.5	-286.0	0.00	0.00	
6,100.0	14.60	282.92	5,940.9	291.7	-1,271.1	-291.7	0.00	0.00	
6,200.0	14.60	282.92	6,037.7	297.3	-1,295.7	-297.3	0.00	0.00	
6,300.0	14.60	282.92	6,134.4	302.9	-1,320.2	-302.9	0.00	0.00	
6,400.0	14.60	282.92	6,231.2	308.6	-1,344.8	-308.6	0.00	0.00	
6,500.0	14.60	282.92	6,328.0	314.2	-1,369.3	-314.2	0.00	0.00	
6,600.0	14.60	282.92	6,424.8	319.8	-1,393.9	-319.8	0.00	0.00	
6,700.0	14.60	282.92	6,521.5	325.5	-1,418.5	-325.5	0.00	0.00	
6,800.0	14.60	282.92	6,618.3	331.1	-1,443.0	-331.1	0.00	0.00	
6,900.0	14.60	282.92	6,715.1	336.8	-1,467.6	-336.8	0.00	0.00	
6,984.3	14.60	282.92	6,796.7	341.5	-1,488.3	-341.5	0.00	0.00	Start 8° Build/Turn
7,000.0	14.38	277.99	6,811.9	342.2	-1,492.2	-342.2	8.00	-1.41	
7,050.0	14.38	261.84	6,860.3	342.2	-1,504.5	-342.2	8.00	0.01	
7,082.8	14.97	251.74	6,892.0	340.3	-1,512.5	-340.3	8.00	1.78	Teepee Buttes (*if present)
7,100.0	15.44	246.80	6,908.6	338.7	-1,516.8	-338.7	8.00	2.75	
7,150.0	17.36	234.32	6,956.6	331.7	-1,528.9	-331.7	8.00	3.83	
7,200.0	19.88	224.58	7,004.0	321.3	-1,541.0	-321.3	8.00	5.06	
7,250.0	22.82	217.10	7,050.6	307.5	-1,552.8	-307.5	8.00	5.88	
7,300.0	26.03	211.31	7,096.1	290.4	-1,564.3	-290.4	8.00	6.42	
7,350.0	29.42	206.75	7,140.4	270.0	-1,575.6	-270.0	8.00	6.78	
7,400.0	32.94	203.07	7,183.1	246.6	-1,586.4	-246.6	8.00	7.04	
7,450.0	36.55	200.03	7,224.2	220.1	-1,596.9	-220.1	8.00	7.21	
7,500.0	40.22	197.47	7,263.4	190.7	-1,606.8	-190.7	8.00	7.34	
7,550.0	43.94	195.27	7,300.5	158.5	-1,616.2	-158.5	8.00	7.44	
7,600.0	47.70	193.36	7,335.4	123.8	-1,625.1	-123.8	8.00	7.51	
7,616.0	48.91	192.79	7,346.0	112.1	-1,627.8	-112.1	8.00	7.55	Sharon Springs
7,650.0	51.48	191.66	7,367.8	86.6	-1,633.3	-86.6	8.00	7.58	
7,700.0	55.29	190.13	7,397.6	47.2	-1,640.9	-47.2	8.00	7.61	
7,711.4	56.16	189.80	7,404.0	37.9	-1,642.5	-37.9	8.00	7.64	Niobrara
7,750.0	59.11	188.73	7,424.7	5.7	-1,647.8	-5.7	8.00	7.65	
7,800.0	62.95	187.45	7,448.9	-37.6	-1,653.9	37.6	8.00	7.68	
7,850.0	66.80	186.25	7,470.1	-82.5	-1,659.3	82.5	8.00	7.70	
7,900.0	70.66	185.11	7,488.2	-128.8	-1,663.9	128.8	8.00	7.72	
7,950.0	74.53	184.03	7,503.2	-176.4	-1,667.7	176.4	8.00	7.73	
8,000.0	78.39	182.99	7,514.9	-224.9	-1,670.7	224.9	8.00	7.74	
8,000.6	78.44	182.98	7,515.0	-225.5	-1,670.7	225.5	8.00	7.74	B Chalk
8,050.0	82.27	181.98	7,523.3	-274.1	-1,672.8	274.1	8.00	7.75	
8,100.0	86.14	180.98	7,528.3	-323.9	-1,674.1	323.9	8.00	7.75	
8,149.7	90.00	180.00	7,530.0	-373.6	-1,674.5	373.6	8.00	7.75	LP @ 7530' TVD; 90°
8,200.0	90.00	180.00	7,530.0	-423.8	-1,674.5	423.8	0.00	0.00	
8,300.0	90.00	180.00	7,530.0	-523.8	-1,674.5	523.8	0.00	0.00	

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Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
8,400.0	90.00	180.00	7,530.0	-623.8	-1,674.5	623.8	0.00	0.00	
8,500.0	90.00	180.00	7,530.0	-723.8	-1,674.5	723.8	0.00	0.00	
8,600.0	90.00	180.00	7,530.0	-823.8	-1,674.5	823.8	0.00	0.00	
8,700.0	90.00	180.00	7,530.0	-923.8	-1,674.5	923.8	0.00	0.00	
8,800.0	90.00	180.00	7,530.0	-1,023.8	-1,674.5	1,023.8	0.00	0.00	
8,900.0	90.00	180.00	7,530.0	-1,123.8	-1,674.5	1,123.8	0.00	0.00	
9,000.0	90.00	180.00	7,530.0	-1,223.8	-1,674.5	1,223.8	0.00	0.00	
9,100.0	90.00	180.00	7,530.0	-1,323.8	-1,674.5	1,323.8	0.00	0.00	
9,200.0	90.00	180.00	7,530.0	-1,423.8	-1,674.5	1,423.8	0.00	0.00	
9,300.0	90.00	180.00	7,530.0	-1,523.8	-1,674.5	1,523.8	0.00	0.00	
9,400.0	90.00	180.00	7,530.0	-1,623.8	-1,674.5	1,623.8	0.00	0.00	
9,500.0	90.00	180.00	7,530.0	-1,723.8	-1,674.5	1,723.8	0.00	0.00	
9,600.0	90.00	180.00	7,530.0	-1,823.8	-1,674.5	1,823.8	0.00	0.00	
9,700.0	90.00	180.00	7,530.0	-1,923.8	-1,674.5	1,923.8	0.00	0.00	
9,800.0	90.00	180.00	7,530.0	-2,023.8	-1,674.5	2,023.8	0.00	0.00	
9,900.0	90.00	180.00	7,530.0	-2,123.8	-1,674.5	2,123.8	0.00	0.00	
10,000.0	90.00	180.00	7,530.0	-2,223.8	-1,674.5	2,223.8	0.00	0.00	
10,100.0	90.00	180.00	7,530.0	-2,323.8	-1,674.5	2,323.8	0.00	0.00	
10,200.0	90.00	180.00	7,530.0	-2,423.8	-1,674.5	2,423.8	0.00	0.00	
10,300.0	90.00	180.00	7,530.0	-2,523.8	-1,674.5	2,523.8	0.00	0.00	
10,400.0	90.00	180.00	7,530.0	-2,623.8	-1,674.5	2,623.8	0.00	0.00	
10,500.0	90.00	180.00	7,530.0	-2,723.8	-1,674.5	2,723.8	0.00	0.00	
10,600.0	90.00	180.00	7,530.0	-2,823.8	-1,674.5	2,823.8	0.00	0.00	
10,700.0	90.00	180.00	7,530.0	-2,923.8	-1,674.5	2,923.8	0.00	0.00	
10,800.0	90.00	180.00	7,530.0	-3,023.8	-1,674.5	3,023.8	0.00	0.00	
10,900.0	90.00	180.00	7,530.0	-3,123.8	-1,674.5	3,123.8	0.00	0.00	
11,000.0	90.00	180.00	7,530.0	-3,223.8	-1,674.5	3,223.8	0.00	0.00	
11,100.0	90.00	180.00	7,530.0	-3,323.8	-1,674.5	3,323.8	0.00	0.00	
11,200.0	90.00	180.00	7,530.0	-3,423.8	-1,674.5	3,423.8	0.00	0.00	
11,300.0	90.00	180.00	7,530.0	-3,523.8	-1,674.5	3,523.8	0.00	0.00	
11,400.0	90.00	180.00	7,530.0	-3,623.8	-1,674.5	3,623.8	0.00	0.00	
11,500.0	90.00	180.00	7,530.0	-3,723.8	-1,674.5	3,723.8	0.00	0.00	
11,600.0	90.00	180.00	7,530.0	-3,823.8	-1,674.5	3,823.8	0.00	0.00	
11,700.0	90.00	180.00	7,530.0	-3,923.8	-1,674.5	3,923.8	0.00	0.00	
11,800.0	90.00	180.00	7,530.0	-4,023.8	-1,674.5	4,023.8	0.00	0.00	
11,900.0	90.00	180.00	7,530.0	-4,123.8	-1,674.5	4,123.8	0.00	0.00	
12,000.0	90.00	180.00	7,530.0	-4,223.8	-1,674.5	4,223.8	0.00	0.00	
12,100.0	90.00	180.00	7,530.0	-4,323.8	-1,674.5	4,323.8	0.00	0.00	
12,200.0	90.00	180.00	7,530.0	-4,423.8	-1,674.5	4,423.8	0.00	0.00	
12,300.0	90.00	180.00	7,530.0	-4,523.8	-1,674.5	4,523.8	0.00	0.00	
12,400.0	90.00	180.00	7,530.0	-4,623.8	-1,674.5	4,623.8	0.00	0.00	
12,500.0	90.00	180.00	7,530.0	-4,723.8	-1,674.5	4,723.8	0.00	0.00	
12,600.0	90.00	180.00	7,530.0	-4,823.8	-1,674.5	4,823.8	0.00	0.00	
12,700.0	90.00	180.00	7,530.0	-4,923.8	-1,674.5	4,923.8	0.00	0.00	
12,800.0	90.00	180.00	7,530.0	-5,023.8	-1,674.5	5,023.8	0.00	0.00	
12,900.0	90.00	180.00	7,530.0	-5,123.8	-1,674.5	5,123.8	0.00	0.00	
13,000.0	90.00	180.00	7,530.0	-5,223.8	-1,674.5	5,223.8	0.00	0.00	
13,100.0	90.00	180.00	7,530.0	-5,323.8	-1,674.5	5,323.8	0.00	0.00	
13,200.0	90.00	180.00	7,530.0	-5,423.8	-1,674.5	5,423.8	0.00	0.00	
13,300.0	90.00	180.00	7,530.0	-5,523.8	-1,674.5	5,523.8	0.00	0.00	
13,400.0	90.00	180.00	7,530.0	-5,623.8	-1,674.5	5,623.8	0.00	0.00	
13,500.0	90.00	180.00	7,530.0	-5,723.8	-1,674.5	5,723.8	0.00	0.00	

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	WELL @ 5036.0ft
Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5036.0ft
Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**North Reference:**	True
Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
13,600.0	90.00	180.00	7,530.0	-5,823.8	-1,674.5	5,823.8	0.00	0.00	
13,700.0	90.00	180.00	7,530.0	-5,923.8	-1,674.5	5,923.8	0.00	0.00	
13,800.0	90.00	180.00	7,530.0	-6,023.8	-1,674.5	6,023.8	0.00	0.00	
13,900.0	90.00	180.00	7,530.0	-6,123.8	-1,674.5	6,123.8	0.00	0.00	
14,000.0	90.00	180.00	7,530.0	-6,223.8	-1,674.5	6,223.8	0.00	0.00	
14,100.0	90.00	180.00	7,530.0	-6,323.8	-1,674.5	6,323.8	0.00	0.00	
14,200.0	90.00	180.00	7,530.0	-6,423.8	-1,674.5	6,423.8	0.00	0.00	
14,300.0	90.00	180.00	7,530.0	-6,523.8	-1,674.5	6,523.8	0.00	0.00	
14,400.0	90.00	180.00	7,530.0	-6,623.8	-1,674.5	6,623.8	0.00	0.00	
14,500.0	90.00	180.00	7,530.0	-6,723.8	-1,674.5	6,723.8	0.00	0.00	
14,600.0	90.00	180.00	7,530.0	-6,823.8	-1,674.5	6,823.8	0.00	0.00	
14,700.0	90.00	180.00	7,530.0	-6,923.8	-1,674.5	6,923.8	0.00	0.00	
14,800.0	90.00	180.00	7,530.0	-7,023.8	-1,674.5	7,023.8	0.00	0.00	
14,900.0	90.00	180.00	7,530.0	-7,123.8	-1,674.5	7,123.8	0.00	0.00	
15,000.0	90.00	180.00	7,530.0	-7,223.8	-1,674.5	7,223.8	0.00	0.00	
15,100.0	90.00	180.00	7,530.0	-7,323.8	-1,674.5	7,323.8	0.00	0.00	
15,200.0	90.00	180.00	7,530.0	-7,423.8	-1,674.5	7,423.8	0.00	0.00	
15,300.0	90.00	180.00	7,530.0	-7,523.8	-1,674.5	7,523.8	0.00	0.00	
15,400.0	90.00	180.00	7,530.0	-7,623.8	-1,674.5	7,623.8	0.00	0.00	
15,500.0	90.00	180.00	7,530.0	-7,723.8	-1,674.5	7,723.8	0.00	0.00	
15,600.0	90.00	180.00	7,530.0	-7,823.8	-1,674.5	7,823.8	0.00	0.00	
15,700.0	90.00	180.00	7,530.0	-7,923.8	-1,674.5	7,923.8	0.00	0.00	
15,800.0	90.00	180.00	7,530.0	-8,023.8	-1,674.5	8,023.8	0.00	0.00	
15,900.0	90.00	180.00	7,530.0	-8,123.8	-1,674.5	8,123.8	0.00	0.00	
16,000.0	90.00	180.00	7,530.0	-8,223.8	-1,674.5	8,223.8	0.00	0.00	
16,100.0	90.00	180.00	7,530.0	-8,323.8	-1,674.5	8,323.8	0.00	0.00	
16,200.0	90.00	180.00	7,530.0	-8,423.8	-1,674.5	8,423.8	0.00	0.00	
16,300.0	90.00	180.00	7,530.0	-8,523.8	-1,674.5	8,523.8	0.00	0.00	
16,400.0	90.00	180.00	7,530.0	-8,623.8	-1,674.5	8,623.8	0.00	0.00	
16,500.0	90.00	180.00	7,530.0	-8,723.8	-1,674.5	8,723.8	0.00	0.00	
16,600.0	90.00	180.00	7,530.0	-8,823.8	-1,674.5	8,823.8	0.00	0.00	
16,700.0	90.00	180.00	7,530.0	-8,923.8	-1,674.5	8,923.8	0.00	0.00	
16,800.0	90.00	180.00	7,530.0	-9,023.8	-1,674.5	9,023.8	0.00	0.00	
16,900.0	90.00	180.00	7,530.0	-9,123.8	-1,674.5	9,123.8	0.00	0.00	
17,000.0	90.00	180.00	7,530.0	-9,223.8	-1,674.5	9,223.8	0.00	0.00	
17,100.0	90.00	180.00	7,530.0	-9,323.8	-1,674.5	9,323.8	0.00	0.00	
17,200.0	90.00	180.00	7,530.0	-9,423.8	-1,674.5	9,423.8	0.00	0.00	
17,300.0	90.00	180.00	7,530.0	-9,523.8	-1,674.5	9,523.8	0.00	0.00	
17,400.0	90.00	180.00	7,530.0	-9,623.8	-1,674.5	9,623.8	0.00	0.00	
17,500.0	90.00	180.00	7,530.0	-9,723.8	-1,674.5	9,723.8	0.00	0.00	
17,589.7	90.00	180.00	7,530.0	-9,813.6	-1,674.5	9,813.6	0.00	0.00	TD at 17589.7

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Morgan Hills 1A-7H-A16 - plan hits target center - Point	0.00	0.00	7,530.0	-9,813.6	-1,674.5	1,259,586.30	3,127,447.09	40.045048	-105.044801

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	WELL @ 5036.0ft
Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5036.0ft
Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**North Reference:**	True
Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
400.0	400.0	Fox Hills - BASE			
4,916.9	4,796.0	Sussex		0.00	
5,226.9	5,096.0	Shannon		0.00	
7,082.8	6,892.0	Teepee Buttes (*if present)		0.00	
7,616.0	7,346.0	Sharon Springs		0.00	
7,711.4	7,404.0	Niobrara		0.00	
8,000.6	7,515.0	B Chalk		0.00	

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
200.0	200.0	0.0	0.0	KOP @ 200' MD
1,659.9	1,644.1	41.4	-180.3	EOB; 14.6°
6,984.3	6,796.7	341.5	-1,488.3	Start 8° Build/Turn
8,149.7	7,530.0	-373.6	-1,674.5	LP @ 7530' TVD; 90°
17,589.7	7,530.0	-9,813.6	-1,674.5	TD at 17589.7

EnCana Oil & Gas (USA) Inc

DJ Wattenberg
S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)
Morgan Hills 1A-7H-A168
HZ
Plan #2

Anticollision Report

03 September, 2014

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Reference	Plan #2

Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	**Error Model:**	Systematic Ellipse
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,550.0ft	**Error Surface:**	Elliptical Conic
Warning Levels Evaluated at:	2.00 **Sigma**		

Survey Tool Program **Date** 9/3/2014

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	17,589.7	Plan #2 (HZ)	Geolink MWD	Geolink MWD

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)						
BEARDEN 24-6 (EXISTING) - ENCANA WELL - PLAN O	12,655.9	7,559.0	989.6	883.2	9.301	CC, ES
BEARDEN 24-6 (EXISTING) - ENCANA WELL - PLAN O	12,800.0	7,559.0	1,000.0	891.1	9.183	SF
ERIE CHAMPLIN B UNIT 1 - ENCANA WELL - NO SURV	13,957.2	7,564.0	1,151.0	1,026.9	9.270	CC, ES
ERIE CHAMPLIN B UNIT 1 - ENCANA WELL - NO SURV	14,100.0	7,564.0	1,159.9	1,033.2	9.158	SF
ERIE CHAMPLIN B UNIT 2 - ENCANA WELL - NO SURV	16,984.4	7,559.0	1,117.4	940.4	6.313	CC
ERIE CHAMPLIN B UNIT 2 - ENCANA WELL - NO SURV	17,000.0	7,559.0	1,117.5	940.2	6.304	ES
ERIE CHAMPLIN B UNIT 2 - ENCANA WELL - NO SURV	17,100.0	7,559.0	1,123.3	944.3	6.275	SF
Morgan Hills 1B-7H-A168 - HZ - Plan #2	200.0	200.0	10.1	9.4	15.434	CC, ES
Morgan Hills 1B-7H-A168 - HZ - Plan #2	17,589.7	17,772.2	346.6	91.2	1.357	Level 3, SF
Morgan Hills 1C-7H-A168 - HZ - Plan #2	200.0	199.0	20.2	19.5	30.957	CC, ES
Morgan Hills 1C-7H-A168 - HZ - Plan #2	17,589.7	17,485.7	500.1	151.3	1.434	Level 3, SF
Morgan Hills 1D-7H-A168 - HZ - Plan #2	200.0	199.0	29.9	29.3	46.001	CC, ES
Morgan Hills 1D-7H-A168 - HZ - Plan #2	17,589.7	17,691.1	787.8	455.1	2.368	SF
Morgan Hills 1E-7H-A168 - HZ - Plan #2	200.0	199.0	40.0	39.4	61.476	CC, ES
Morgan Hills 1E-7H-A168 - HZ - Plan #2	17,589.7	17,426.3	1,000.0	651.3	2.868	SF
Morgan Hills 1F-7H-A168 - HZ - Plan #2	200.0	199.0	50.1	49.4	76.951	CC, ES
Morgan Hills 1F-7H-A168 - HZ - Plan #2	17,589.7	17,642.6	1,273.0	930.3	3.715	SF
Morgan Hills 1G-7H-A168 - HZ - Plan #2	200.0	199.0	60.2	59.5	92.427	CC, ES
Morgan Hills 1G-7H-A168 - HZ - Plan #2	17,589.7	17,401.3	1,500.2	1,151.3	4.300	SF
Morgan Hills 1H-7H-A168 - HZ - Plan #2	200.0	199.0	70.0	69.3	107.473	CC, ES
Morgan Hills 1H-7H-A168 - HZ - Plan #2	1,000.0	996.5	124.6	121.1	35.845	SF
Morgan Hills 1I-7H-A168 - HZ - Plan #2	200.0	199.0	80.0	79.4	122.948	CC, ES
Morgan Hills 1I-7H-A168 - HZ - Plan #2	900.0	894.1	125.8	122.7	40.684	SF
Sosa 21-18 - DD (MWD) - DD	13,257.7	7,649.8	912.4	795.9	7.835	CC, ES
Sosa 21-18 - DD (MWD) - DD	13,400.0	7,647.1	923.4	804.5	7.766	SF
Sosa 22-18 - DD - DD	14,745.9	7,669.2	995.2	850.7	6.886	CC, ES
Sosa 22-18 - DD - DD	14,900.0	7,669.9	1,007.1	859.8	6.841	SF
THOMAS 24-7 (EXISTING) - ENCANA WELL - Plan #1	12,088.4	7,523.9	1,021.0	929.2	11.117	CC
THOMAS 24-7 (EXISTING) - ENCANA WELL - Plan #1	12,100.0	7,523.9	1,021.1	929.0	11.094	ES
THOMAS 24-7 (EXISTING) - ENCANA WELL - Plan #1	12,300.0	7,523.9	1,042.7	947.2	10.918	SF
THOMAS 24-7 (EXISTING) - ENCANA WELL - Plan #2	12,088.4	7,523.9	1,021.0	929.2	11.117	CC
THOMAS 24-7 (EXISTING) - ENCANA WELL - Plan #2	12,100.0	7,523.9	1,021.1	929.0	11.094	ES
THOMAS 24-7 (EXISTING) - ENCANA WELL - Plan #2	12,300.0	7,523.9	1,042.7	947.2	10.918	SF
THOMAS 24-7 (EXISTING) - ENCANA WELL - SURVEY	12,081.1	7,527.4	1,026.1	934.4	11.192	CC
THOMAS 24-7 (EXISTING) - ENCANA WELL - SURVEY	12,100.0	7,527.3	1,026.3	934.2	11.154	ES
THOMAS 24-7 (EXISTING) - ENCANA WELL - SURVEY	12,300.0	7,526.0	1,049.2	953.7	10.990	SF
THOMAS 24-7 (Existing) - Existing - NO SURVEYS	11,950.6	7,496.0	1,279.3	1,190.1	14.339	CC, ES
THOMAS 24-7 (Existing) - Existing - NO SURVEYS	12,300.0	7,496.0	1,326.2	1,230.9	13.921	SF
THOMAS 2-8-7 (EXISTING) - ENCANA WELL - Plan #1						Out of range
THOMAS 2-8-7 (EXISTING) - ENCANA WELL - SURVEY						Out of range
THOMAS 33-7 (EXISTING) - ENCANA WELL - SURVEY	10,786.3	7,782.4	71.2	-9.8	0.879	Level 1, CC, ES, SF
THOMAS E UNIT 1 (EXISTING) - Existing - NO SURVEY	10,845.0	7,495.0	1,526.9	1,456.7	21.743	CC, ES
THOMAS E UNIT 1 (EXISTING) - Existing - NO SURVEY	11,100.0	7,495.0	1,548.1	1,473.5	20.756	SF
WOOLLEY 21-7 (EXISTING) - ENCANA WELL - GYRO	8,072.7	7,593.4	1,243.9	1,215.3	43.558	CC, ES
WOOLLEY 21-7 (EXISTING) - ENCANA WELL - GYRO	8,900.0	7,575.8	1,513.4	1,475.0	39.355	SF
WOOLLEY 22-7 (EXISTING) - ENCANA WELL - SURVE	9,491.9	7,764.8	1,023.5	960.5	16.223	CC
WOOLLEY 22-7 (EXISTING) - ENCANA WELL - SURVE	9,500.0	7,764.8	1,023.6	960.4	16.190	ES
WOOLLEY 22-7 (EXISTING) - ENCANA WELL - SURVE	9,800.0	7,765.3	1,068.9	1,000.8	15.689	SF
WOOLLEY 4-0-7 (EXISTING) - ENCANA WELL - SURVE	7,603.7	7,442.8	745.1	713.6	23.667	CC, ES
WOOLLEY 4-0-7 (EXISTING) - ENCANA WELL - SURVE	7,700.0	7,500.7	751.2	719.2	23.461	SF
WOOLLEY 41-7 (EXISTING) - ENCANA WELL - NO SUR	1,368.5	1,356.4	220.8	215.2	39.092	CC
WOOLLEY 41-7 (EXISTING) - ENCANA WELL - NO SUR	1,400.0	1,387.2	220.9	215.1	37.946	ES
WOOLLEY 41-7 (EXISTING) - ENCANA WELL - NO SUR	1,900.0	1,872.5	254.6	246.2	30.191	SF

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

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Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)						
WOOLLEY 42-7 ENCANA (EXISTING) - ENCANA - NO S	9,411.8	7,534.0	1,390.7	1,344.3	29.994	CC, ES
WOOLLEY 42-7 ENCANA (EXISTING) - ENCANA - NO S	10,000.0	7,534.0	1,510.0	1,454.0	26.955	SF
WOOLLEY A 1-7 (EXISTING) - ENCANA WELL - NO SU	8,893.0	7,550.0	486.7	448.4	12.701	CC
WOOLLEY A 1-7 (EXISTING) - ENCANA WELL - NO SU	8,900.0	7,550.0	486.8	448.3	12.668	ES
WOOLLEY A 1-7 (EXISTING) - ENCANA WELL - NO SU	9,000.0	7,550.0	498.3	458.4	12.480	SF
Woolley-Becky 2E-7H-E168 - Hz - Plan #2	9,539.2	7,776.4	1,343.2	1,294.2	27.430	CC
Woolley-Becky 2E-7H-E168 - Hz - Plan #2	9,600.0	7,738.2	1,343.9	1,294.1	26.958	ES
Woolley-Becky 2E-7H-E168 - Hz - Plan #2	10,300.0	7,517.4	1,495.6	1,434.7	24.567	SF
Woolley-Becky 2F-7H-E168 - Hz - Plan #2	7,600.0	9,255.1	1,114.0	1,056.3	19.309	SF
Woolley-Becky 2F-7H-E168 - Hz - Plan #2	8,100.0	8,807.0	1,045.9	997.6	21.666	ES
Woolley-Becky 2F-7H-E168 - Hz - Plan #2	8,126.8	8,780.2	1,045.8	998.0	21.897	CC
Woolley-Becky 2G-7H-E168 - Hz - Plan #1	7,700.0	9,553.7	887.7	827.8	14.805	SF
Woolley-Becky 2G-7H-E168 - Hz - Plan #1	9,368.0	7,885.6	776.7	729.6	16.509	CC
Woolley-Becky 2G-7H-E168 - Hz - Plan #1	9,400.0	7,862.9	777.0	729.5	16.354	ES
Woolley-Becky 2H-7H-E168 - Hz - Plan #2	9,304.2	7,985.1	286.3	239.2	6.076	CC, ES, SF
Woolley-Sosa 2C-7H-E168 - HZ - Plan #1						Out of range
Woolley-Sosa 2D-7H-E168 - HZ - Plan #1						Out of range
Woolley-Sosa 2E-7H-E168 - HZ - Plan #2	10,428.3	8,886.2	1,481.1	1,411.7	21.358	CC
Woolley-Sosa 2E-7H-E168 - HZ - Plan #2	17,589.7	16,036.2	1,531.5	1,220.6	4.927	ES, SF
Woolley-Sosa 2F-7H-E168 - HZ - Plan #1	9,478.6	7,974.7	1,185.1	1,137.0	24.621	CC
Woolley-Sosa 2F-7H-E168 - HZ - Plan #1	17,589.7	16,087.8	1,187.4	878.9	3.849	ES, SF
Woolley-Sosa 2G-7H-E168 - HZ - Plan #1	9,448.2	7,997.5	844.4	796.8	17.747	CC
Woolley-Sosa 2G-7H-E168 - HZ - Plan #1	17,589.7	16,148.7	848.1	546.1	2.809	ES, SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - BEARDEN 24-6 (EXISTING) - ENCANA WELL - PL

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
11,500.0	7,530.0	7,559.0	7,486.0	74.5	18.7	90.00	-4,879.8	-2,664.1	1,521.7	1,435.3	86.42	17.608	
11,600.0	7,530.0	7,559.0	7,486.0	76.1	18.7	90.00	-4,879.8	-2,664.1	1,447.2	1,359.0	88.14	16.419	
11,700.0	7,530.0	7,559.0	7,486.0	77.7	18.7	90.00	-4,879.8	-2,664.1	1,375.9	1,286.0	89.87	15.311	
11,800.0	7,530.0	7,559.0	7,486.0	79.3	18.7	90.00	-4,879.8	-2,664.1	1,308.4	1,216.8	91.59	14.286	
11,900.0	7,530.0	7,559.0	7,486.0	80.9	18.7	90.00	-4,879.8	-2,664.1	1,245.3	1,152.0	93.32	13.345	
12,000.0	7,530.0	7,559.0	7,486.0	82.5	18.7	90.00	-4,879.8	-2,664.1	1,187.3	1,092.2	95.04	12.492	
12,100.0	7,530.0	7,559.0	7,486.0	84.1	18.7	90.00	-4,879.8	-2,664.1	1,135.1	1,038.3	96.77	11.729	
12,200.0	7,530.0	7,559.0	7,486.0	85.7	18.7	90.00	-4,879.8	-2,664.1	1,089.6	991.1	98.50	11.062	
12,300.0	7,530.0	7,559.0	7,486.0	87.3	18.7	90.00	-4,879.8	-2,664.1	1,051.7	951.4	100.23	10.493	
12,400.0	7,530.0	7,559.0	7,486.0	89.0	18.7	90.00	-4,879.8	-2,664.1	1,022.2	920.2	101.96	10.025	
12,500.0	7,530.0	7,559.0	7,486.0	90.6	18.7	90.00	-4,879.8	-2,664.1	1,001.8	898.1	103.69	9.661	
12,600.0	7,530.0	7,559.0	7,486.0	92.2	18.7	90.00	-4,879.8	-2,664.1	991.2	885.8	105.43	9.402	
12,655.9	7,530.0	7,559.0	7,486.0	93.1	18.7	90.00	-4,879.8	-2,664.1	989.6	883.2	106.40	9.301	CC, ES
12,700.0	7,530.0	7,559.0	7,486.0	93.9	18.7	90.00	-4,879.8	-2,664.1	990.6	883.4	107.16	9.244	
12,800.0	7,530.0	7,559.0	7,486.0	95.5	18.7	90.00	-4,879.8	-2,664.1	1,000.0	891.1	108.90	9.183	SF
12,900.0	7,530.0	7,559.0	7,486.0	97.2	18.7	90.00	-4,879.8	-2,664.1	1,019.3	908.6	110.63	9.213	
13,000.0	7,530.0	7,559.0	7,486.0	98.8	18.7	90.00	-4,879.8	-2,664.1	1,047.7	935.3	112.37	9.324	
13,100.0	7,530.0	7,559.0	7,486.0	100.5	18.7	90.00	-4,879.8	-2,664.1	1,084.7	970.6	114.10	9.506	
13,200.0	7,530.0	7,559.0	7,486.0	102.1	18.7	90.00	-4,879.8	-2,664.1	1,129.3	1,013.5	115.84	9.749	
13,300.0	7,530.0	7,559.0	7,486.0	103.8	18.7	90.00	-4,879.8	-2,664.1	1,180.7	1,063.2	117.58	10.042	
13,400.0	7,530.0	7,559.0	7,486.0	105.5	18.7	90.00	-4,879.8	-2,664.1	1,238.1	1,118.8	119.32	10.377	
13,500.0	7,530.0	7,559.0	7,486.0	107.1	18.7	90.00	-4,879.8	-2,664.1	1,300.7	1,179.6	121.06	10.744	
13,600.0	7,530.0	7,559.0	7,486.0	108.8	18.7	90.00	-4,879.8	-2,664.1	1,367.7	1,244.9	122.80	11.138	
13,700.0	7,530.0	7,559.0	7,486.0	110.5	18.7	90.00	-4,879.8	-2,664.1	1,438.5	1,314.0	124.54	11.551	
13,800.0	7,530.0	7,559.0	7,486.0	112.2	18.7	90.00	-4,879.8	-2,664.1	1,512.7	1,386.4	126.28	11.979	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - ERIE CHAMPLIN B UNIT 1 - ENCANA WELL - NO

Offset Site Error: 0.0 ft

Survey Program: 8393-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
13,000.0	7,530.0	7,564.0	7,564.0	98.8	13.2	-90.00	-6,181.0	-523.5	1,497.0	1,389.5	107.52	13.924	
13,100.0	7,530.0	7,564.0	7,564.0	100.5	13.2	-90.00	-6,181.0	-523.5	1,435.2	1,325.9	109.26	13.136	
13,200.0	7,530.0	7,564.0	7,564.0	102.1	13.2	-90.00	-6,181.0	-523.5	1,377.8	1,266.8	110.99	12.413	
13,300.0	7,530.0	7,564.0	7,564.0	103.8	13.2	-90.00	-6,181.0	-523.5	1,325.5	1,212.7	112.73	11.758	
13,400.0	7,530.0	7,564.0	7,564.0	105.5	13.2	-90.00	-6,181.0	-523.5	1,278.8	1,164.3	114.47	11.172	
13,500.0	7,530.0	7,564.0	7,564.0	107.1	13.2	-90.00	-6,181.0	-523.5	1,238.5	1,122.3	116.21	10.658	
13,600.0	7,530.0	7,564.0	7,564.0	108.8	13.2	-90.00	-6,181.0	-523.5	1,205.2	1,087.2	117.95	10.218	
13,700.0	7,530.0	7,564.0	7,564.0	110.5	13.2	-90.00	-6,181.0	-523.5	1,179.4	1,059.7	119.69	9.854	
13,800.0	7,530.0	7,564.0	7,564.0	112.2	13.2	-90.00	-6,181.0	-523.5	1,161.7	1,040.3	121.43	9.567	
13,900.0	7,530.0	7,564.0	7,564.0	113.9	13.2	-90.00	-6,181.0	-523.5	1,152.5	1,029.3	123.17	9.357	
13,957.2	7,530.0	7,564.0	7,564.0	114.8	13.2	-90.00	-6,181.0	-523.5	1,151.0	1,026.9	124.17	9.270	CC, ES
14,000.0	7,530.0	7,564.0	7,564.0	115.5	13.2	-90.00	-6,181.0	-523.5	1,151.8	1,026.9	124.91	9.221	
14,100.0	7,530.0	7,564.0	7,564.0	117.2	13.2	-90.00	-6,181.0	-523.5	1,159.9	1,033.2	126.65	9.158	SF
14,200.0	7,530.0	7,564.0	7,564.0	118.9	13.2	-90.00	-6,181.0	-523.5	1,176.4	1,048.0	128.40	9.162	
14,300.0	7,530.0	7,564.0	7,564.0	120.6	13.2	-90.00	-6,181.0	-523.5	1,201.0	1,070.8	130.14	9.229	
14,400.0	7,530.0	7,564.0	7,564.0	122.3	13.2	-90.00	-6,181.0	-523.5	1,233.3	1,101.4	131.88	9.351	
14,500.0	7,530.0	7,564.0	7,564.0	124.0	13.2	-90.00	-6,181.0	-523.5	1,272.6	1,139.0	133.62	9.524	
14,600.0	7,530.0	7,564.0	7,564.0	125.7	13.2	-90.00	-6,181.0	-523.5	1,318.3	1,183.0	135.37	9.739	
14,700.0	7,530.0	7,564.0	7,564.0	127.4	13.2	-90.00	-6,181.0	-523.5	1,369.9	1,232.8	137.11	9.991	
14,800.0	7,530.0	7,564.0	7,564.0	129.1	13.2	-90.00	-6,181.0	-523.5	1,426.6	1,287.7	138.86	10.274	
14,900.0	7,530.0	7,564.0	7,564.0	130.8	13.2	-90.00	-6,181.0	-523.5	1,487.8	1,347.2	140.60	10.582	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - ERIE CHAMPLIN B UNIT 2 - ENCANA WELL - NO

Offset Site Error: 0.0 ft

Survey Program: 8413-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
16,000.0	7,530.0	7,559.0	7,559.0	149.5	13.2	-90.00	-9,208.2	-557.1	1,489.1	1,329.3	159.79	9.319	
16,100.0	7,530.0	7,559.0	7,559.0	151.2	13.2	-90.00	-9,208.2	-557.1	1,425.0	1,263.5	161.54	8.821	
16,200.0	7,530.0	7,559.0	7,559.0	153.0	13.2	-90.00	-9,208.2	-557.1	1,365.2	1,201.9	163.29	8.361	
16,300.0	7,530.0	7,559.0	7,559.0	154.7	13.2	-90.00	-9,208.2	-557.1	1,310.3	1,145.3	165.03	7.940	
16,400.0	7,530.0	7,559.0	7,559.0	156.4	13.2	-90.00	-9,208.2	-557.1	1,261.0	1,094.2	166.78	7.560	
16,500.0	7,530.0	7,559.0	7,559.0	158.1	13.2	-90.00	-9,208.2	-557.1	1,217.8	1,049.3	168.53	7.226	
16,600.0	7,530.0	7,559.0	7,559.0	159.8	13.2	-90.00	-9,208.2	-557.1	1,181.6	1,011.4	170.28	6.939	
16,700.0	7,530.0	7,559.0	7,559.0	161.5	13.2	-90.00	-9,208.2	-557.1	1,153.0	981.0	172.02	6.702	
16,800.0	7,530.0	7,559.0	7,559.0	163.3	13.2	-90.00	-9,208.2	-557.1	1,132.5	958.7	173.77	6.517	
16,900.0	7,530.0	7,559.0	7,559.0	165.0	13.2	-90.00	-9,208.2	-557.1	1,120.6	945.0	175.52	6.384	
16,984.4	7,530.0	7,559.0	7,559.0	166.4	13.2	-90.00	-9,208.2	-557.1	1,117.4	940.4	177.00	6.313	CC
17,000.0	7,530.0	7,559.0	7,559.0	166.7	13.2	-90.00	-9,208.2	-557.1	1,117.5	940.2	177.27	6.304	ES
17,100.0	7,530.0	7,559.0	7,559.0	168.4	13.2	-90.00	-9,208.2	-557.1	1,123.3	944.3	179.02	6.275	SF
17,200.0	7,530.0	7,559.0	7,559.0	170.1	13.2	-90.00	-9,208.2	-557.1	1,138.0	957.2	180.77	6.295	
17,300.0	7,530.0	7,559.0	7,559.0	171.9	13.2	-90.00	-9,208.2	-557.1	1,161.1	978.6	182.51	6.362	
17,400.0	7,530.0	7,559.0	7,559.0	173.6	13.2	-90.00	-9,208.2	-557.1	1,192.2	1,007.9	184.26	6.470	
17,500.0	7,530.0	7,559.0	7,559.0	175.3	13.2	-90.00	-9,208.2	-557.1	1,230.6	1,044.6	186.01	6.616	
17,589.7	7,530.0	7,559.0	7,559.0	176.9	13.2	-90.00	-9,208.2	-557.1	1,270.8	1,083.2	187.58	6.775	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1B-7H-A168 - HZ - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	90.00	0.0	10.1	10.1				
100.0	100.0	100.0	100.0	0.2	0.2	90.00	0.0	10.1	10.1	9.8	0.30	33.175	
200.0	200.0	200.0	200.0	0.3	0.3	90.00	0.0	10.1	10.1	9.4	0.65	15.434	CC, ES
300.0	300.0	300.1	300.1	0.5	0.5	167.82	0.1	9.9	10.7	9.7	1.00	10.695	
400.0	400.0	400.3	400.3	0.7	0.7	168.42	0.5	8.2	11.6	10.2	1.35	8.569	
500.0	499.9	500.5	500.4	0.9	0.9	168.66	1.4	4.8	12.5	10.8	1.70	7.322	
600.0	599.7	600.7	600.5	1.1	1.1	168.59	2.8	-0.3	13.3	11.3	2.05	6.502	
700.0	699.4	700.9	700.5	1.3	1.3	168.28	4.6	-7.1	14.2	11.8	2.40	5.923	
800.0	798.9	801.2	800.3	1.5	1.5	167.78	6.8	-15.5	15.1	12.4	2.76	5.490	
900.0	898.3	901.4	900.0	1.8	1.7	167.11	9.6	-25.7	16.1	12.9	3.12	5.154	
1,000.0	997.4	1,001.7	999.5	2.0	2.0	166.30	12.7	-37.5	17.0	13.5	3.48	4.883	
1,100.0	1,096.3	1,102.0	1,098.8	2.3	2.3	165.38	16.3	-51.0	17.9	14.1	3.85	4.657	
1,200.0	1,194.9	1,202.3	1,197.9	2.7	2.6	164.36	20.4	-66.2	18.9	14.7	4.24	4.463	
1,300.0	1,293.3	1,302.6	1,296.7	3.0	2.9	163.27	24.9	-83.1	19.9	15.3	4.63	4.292	
1,400.0	1,391.2	1,402.9	1,395.2	3.4	3.3	162.12	29.9	-101.6	20.9	15.8	5.05	4.136	
1,500.0	1,488.9	1,503.1	1,493.2	3.8	3.7	161.05	35.3	-121.6	22.1	16.6	5.49	4.018	
1,600.0	1,586.1	1,603.1	1,590.9	4.3	4.1	161.20	40.7	-141.9	24.6	18.7	5.90	4.165	
1,659.9	1,644.1	1,662.9	1,649.4	4.5	4.3	161.84	43.9	-154.1	26.9	20.8	6.13	4.388	
1,700.0	1,683.0	1,703.0	1,688.6	4.7	4.4	162.35	46.1	-162.2	28.6	22.3	6.28	4.561	
1,800.0	1,779.7	1,802.9	1,786.3	5.2	4.8	163.37	51.5	-182.5	33.0	26.3	6.65	4.960	
1,900.0	1,876.5	1,902.8	1,884.0	5.6	5.2	164.16	57.0	-202.8	37.3	30.3	7.03	5.315	
2,000.0	1,973.3	2,002.7	1,981.6	6.1	5.6	164.78	62.4	-223.0	41.7	34.3	7.41	5.634	
2,100.0	2,070.0	2,102.6	2,079.3	6.6	6.0	165.29	67.8	-243.3	46.1	38.3	7.78	5.921	
2,200.0	2,166.8	2,202.5	2,177.0	7.1	6.5	165.71	73.3	-263.6	50.5	42.3	8.16	6.182	
2,300.0	2,263.6	2,302.4	2,274.7	7.5	6.9	166.06	78.7	-283.8	54.9	46.3	8.54	6.419	
2,400.0	2,360.4	2,402.3	2,372.3	8.0	7.3	166.35	84.1	-304.1	59.2	50.3	8.93	6.636	
2,500.0	2,457.1	2,502.2	2,470.0	8.5	7.7	166.61	89.5	-324.4	63.6	54.3	9.31	6.835	
2,600.0	2,553.9	2,602.2	2,567.7	9.0	8.1	166.84	95.0	-344.7	68.0	58.3	9.69	7.018	
2,700.0	2,650.7	2,702.1	2,665.4	9.4	8.5	167.03	100.4	-364.9	72.4	62.3	10.07	7.187	
2,800.0	2,747.4	2,802.0	2,763.0	9.9	8.9	167.21	105.8	-385.2	76.8	66.3	10.45	7.344	
2,900.0	2,844.2	2,901.9	2,860.7	10.4	9.3	167.36	111.2	-405.5	81.2	70.3	10.84	7.490	
3,000.0	2,941.0	3,001.8	2,958.4	10.9	9.7	167.50	116.7	-425.8	85.5	74.3	11.22	7.626	
3,100.0	3,037.8	3,101.7	3,056.1	11.4	10.1	167.63	122.1	-446.0	89.9	78.3	11.60	7.752	
3,200.0	3,134.5	3,201.6	3,153.7	11.9	10.5	167.74	127.5	-466.3	94.3	82.3	11.98	7.871	
3,300.0	3,231.3	3,301.5	3,251.4	12.3	10.9	167.85	132.9	-486.6	98.7	86.3	12.37	7.982	
3,400.0	3,328.1	3,401.4	3,349.1	12.8	11.3	167.94	138.4	-506.9	103.1	90.3	12.75	8.087	
3,500.0	3,424.8	3,501.3	3,446.8	13.3	11.8	168.03	143.8	-527.1	107.5	94.4	13.13	8.185	
3,600.0	3,521.6	3,601.2	3,544.4	13.8	12.2	168.11	149.2	-547.4	111.9	98.4	13.51	8.278	
3,700.0	3,618.4	3,701.1	3,642.1	14.3	12.6	168.19	154.7	-567.7	116.3	102.4	13.90	8.366	
3,800.0	3,715.2	3,801.0	3,739.8	14.7	13.0	168.26	160.1	-588.0	120.7	106.4	14.28	8.449	
3,900.0	3,811.9	3,900.9	3,837.5	15.2	13.4	168.32	165.5	-608.2	125.0	110.4	14.66	8.527	
4,000.0	3,908.7	4,000.8	3,935.1	15.7	13.8	168.38	170.9	-628.5	129.4	114.4	15.05	8.602	
4,100.0	4,005.5	4,100.7	4,032.8	16.2	14.2	168.44	176.4	-648.8	133.8	118.4	15.43	8.673	
4,200.0	4,102.2	4,200.6	4,130.5	16.7	14.6	168.49	181.8	-669.0	138.2	122.4	15.81	8.740	
4,300.0	4,199.0	4,300.5	4,228.2	17.2	15.0	168.54	187.2	-689.3	142.6	126.4	16.20	8.804	
4,400.0	4,295.8	4,400.4	4,325.8	17.6	15.4	168.58	192.6	-709.6	147.0	130.4	16.58	8.866	
4,500.0	4,392.6	4,500.3	4,423.5	18.1	15.9	168.63	198.1	-729.9	151.4	134.4	16.96	8.924	
4,600.0	4,489.3	4,600.2	4,521.2	18.6	16.3	168.67	203.5	-750.1	155.8	138.4	17.35	8.980	
4,700.0	4,586.1	4,700.1	4,618.8	19.1	16.7	168.71	208.9	-770.4	160.2	142.4	17.73	9.033	
4,800.0	4,682.9	4,800.0	4,716.5	19.6	17.1	168.74	214.4	-790.7	164.6	146.4	18.11	9.085	
4,900.0	4,779.6	4,899.9	4,814.2	20.1	17.5	168.78	219.8	-811.0	168.9	150.4	18.50	9.134	
5,000.0	4,876.4	4,999.8	4,911.9	20.6	17.9	168.81	225.2	-831.2	173.3	154.5	18.88	9.181	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1B-7H-A168 - HZ - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,100.0	4,973.2	5,099.7	5,009.5	21.0	18.3	168.84	230.6	-851.5	177.7	158.5	19.26	9.226	
5,200.0	5,070.0	5,199.6	5,107.2	21.5	18.7	168.87	236.1	-871.8	182.1	162.5	19.65	9.269	
5,300.0	5,166.7	5,299.5	5,204.9	22.0	19.2	168.90	241.5	-892.1	186.5	166.5	20.03	9.311	
5,400.0	5,263.5	5,399.4	5,302.6	22.5	19.6	168.93	246.9	-912.3	190.9	170.5	20.41	9.351	
5,500.0	5,360.3	5,499.4	5,400.2	23.0	20.0	168.95	252.3	-932.6	195.3	174.5	20.80	9.390	
5,600.0	5,457.0	5,599.3	5,497.9	23.5	20.4	168.98	257.8	-952.9	199.7	178.5	21.18	9.427	
5,700.0	5,553.8	5,699.2	5,595.6	23.9	20.8	169.00	263.2	-973.2	204.1	182.5	21.56	9.463	
5,800.0	5,650.6	5,799.1	5,693.3	24.4	21.2	169.03	268.6	-993.4	208.5	186.5	21.95	9.498	
5,900.0	5,747.4	5,899.0	5,790.9	24.9	21.6	169.05	274.0	-1,013.7	212.9	190.5	22.33	9.531	
6,000.0	5,844.1	5,998.9	5,888.6	25.4	22.0	169.07	279.5	-1,034.0	217.2	194.5	22.72	9.564	
6,100.0	5,940.9	6,098.8	5,986.3	25.9	22.4	169.09	284.9	-1,054.2	221.6	198.5	23.10	9.595	
6,200.0	6,037.7	6,198.7	6,084.0	26.4	22.9	169.11	290.3	-1,074.5	226.0	202.5	23.48	9.625	
6,300.0	6,134.4	6,298.6	6,181.6	26.8	23.3	169.13	295.8	-1,094.8	230.4	206.6	23.87	9.654	
6,400.0	6,231.2	6,398.5	6,279.3	27.3	23.7	169.15	301.2	-1,115.1	234.8	210.6	24.25	9.683	
6,500.0	6,328.0	6,498.4	6,377.0	27.8	24.1	169.16	306.6	-1,135.3	239.2	214.6	24.63	9.710	
6,600.0	6,424.8	6,598.3	6,474.7	28.3	24.5	169.18	312.0	-1,155.6	243.6	218.6	25.02	9.737	
6,700.0	6,521.5	6,698.2	6,572.3	28.8	24.9	169.20	317.5	-1,175.9	248.0	222.6	25.40	9.763	
6,800.0	6,618.3	6,798.1	6,670.0	29.3	25.3	169.21	322.9	-1,196.2	252.4	226.6	25.78	9.788	
6,900.0	6,715.1	6,898.0	6,767.7	29.8	25.7	169.23	328.3	-1,216.4	256.8	230.6	26.17	9.812	
6,984.3	6,796.7	6,982.3	6,850.1	30.2	26.1	169.24	332.9	-1,233.5	260.5	234.0	26.49	9.832	
7,000.0	6,811.9	6,997.9	6,865.4	30.2	26.2	174.03	333.7	-1,236.7	261.2	234.6	26.54	9.838	
7,050.0	6,860.3	7,047.8	6,914.1	30.5	26.4	-170.75	336.5	-1,246.8	263.3	236.4	26.86	9.802	
7,100.0	6,908.6	7,097.3	6,962.6	30.7	26.6	-157.38	339.1	-1,256.9	265.4	238.0	27.42	9.681	
7,150.0	6,956.6	7,146.3	7,010.5	30.9	26.8	-147.24	341.8	-1,266.8	267.8	239.5	28.22	9.490	
7,200.0	7,004.0	7,195.4	7,058.5	31.1	27.0	-140.37	343.9	-1,276.8	270.7	241.5	29.22	9.264	
7,250.0	7,050.6	7,245.8	7,107.8	31.2	27.1	-135.79	342.9	-1,287.0	274.1	244.0	30.17	9.085	
7,300.0	7,096.1	7,297.1	7,157.8	31.4	27.3	-132.84	338.2	-1,297.4	278.1	247.1	31.00	8.971	
7,350.0	7,140.4	7,349.4	7,208.3	31.6	27.5	-131.03	329.7	-1,307.9	282.5	250.9	31.65	8.927	
7,400.0	7,183.1	7,402.8	7,259.1	31.7	27.6	-130.03	317.1	-1,318.4	287.3	255.3	32.09	8.956	
7,450.0	7,224.2	7,457.3	7,309.8	31.8	27.8	-129.57	300.3	-1,329.0	292.5	260.2	32.29	9.059	
7,500.0	7,263.4	7,512.9	7,360.2	32.0	27.9	-129.49	279.2	-1,339.4	297.8	265.6	32.24	9.237	
7,550.0	7,300.5	7,569.7	7,409.9	32.1	28.0	-129.67	253.5	-1,349.7	303.3	271.4	31.96	9.490	
7,600.0	7,335.4	7,627.8	7,458.3	32.2	28.1	-130.01	223.3	-1,359.8	308.9	277.4	31.46	9.818	
7,650.0	7,367.8	7,687.0	7,505.2	32.4	28.3	-130.46	188.4	-1,369.5	314.4	283.6	30.76	10.218	
7,700.0	7,397.6	7,747.4	7,549.9	32.5	28.4	-130.95	148.8	-1,378.8	319.7	289.8	29.92	10.684	
7,750.0	7,424.7	7,809.0	7,591.9	32.6	28.5	-131.47	104.7	-1,387.5	324.8	295.8	28.99	11.205	
7,800.0	7,448.9	7,871.7	7,630.7	32.8	28.6	-131.97	56.2	-1,395.6	329.5	301.5	28.02	11.759	
7,850.0	7,470.1	7,935.5	7,665.8	32.9	28.8	-132.44	3.5	-1,402.9	333.8	306.6	27.19	12.278	
7,900.0	7,488.2	8,000.2	7,696.5	33.1	29.0	-132.86	-53.1	-1,409.2	337.6	311.2	26.43	12.774	
7,950.0	7,503.2	8,065.7	7,722.5	33.2	29.2	-133.21	-113.0	-1,414.6	340.8	314.8	25.98	13.120	
8,000.0	7,514.9	8,131.9	7,743.1	33.4	29.4	-133.49	-175.8	-1,418.9	343.3	317.5	25.87	13.272	
8,050.0	7,523.3	8,198.7	7,758.1	33.6	29.6	-133.69	-240.7	-1,422.0	345.2	319.0	26.18	13.187	
8,100.0	7,528.3	8,265.8	7,767.1	33.8	29.9	-133.80	-307.2	-1,423.9	346.2	319.3	26.94	12.854	
8,149.7	7,530.0	8,332.2	7,770.0	34.0	30.2	-133.83	-373.6	-1,424.5	346.6	318.4	28.12	12.324	
8,200.0	7,530.0	8,382.5	7,770.0	34.2	30.4	-133.83	-423.8	-1,424.5	346.6	317.8	28.78	12.042	
8,300.0	7,530.0	8,482.5	7,770.0	34.7	31.0	-133.83	-523.8	-1,424.5	346.6	316.4	30.21	11.473	
8,400.0	7,530.0	8,582.5	7,770.0	35.3	31.7	-133.83	-623.8	-1,424.5	346.6	314.8	31.77	10.908	
8,500.0	7,530.0	8,682.5	7,770.0	35.9	32.4	-133.83	-723.8	-1,424.5	346.6	313.1	33.46	10.358	
8,600.0	7,530.0	8,782.5	7,770.0	36.6	33.2	-133.83	-823.8	-1,424.5	346.6	311.3	35.25	9.833	
8,700.0	7,530.0	8,882.5	7,770.0	37.4	34.1	-133.83	-923.8	-1,424.5	346.6	309.4	37.12	9.335	
8,800.0	7,530.0	8,982.5	7,770.0	38.3	35.0	-133.83	-1,023.8	-1,424.5	346.6	307.5	39.08	8.869	
8,900.0	7,530.0	9,082.5	7,770.0	39.2	36.0	-133.83	-1,123.8	-1,424.5	346.6	305.5	41.09	8.433	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1B-7H-A168 - HZ - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
9,000.0	7,530.0	9,182.5	7,770.0	40.1	37.1	-133.83	-1,223.8	-1,424.5	346.6	303.4	43.17	8.028	
9,100.0	7,530.0	9,282.5	7,770.0	41.2	38.2	-133.83	-1,323.8	-1,424.5	346.6	301.3	45.29	7.652	
9,200.0	7,530.0	9,382.5	7,770.0	42.2	39.4	-133.83	-1,423.8	-1,424.5	346.6	299.1	47.45	7.303	
9,300.0	7,530.0	9,482.5	7,770.0	43.3	40.6	-133.83	-1,523.8	-1,424.5	346.6	296.9	49.65	6.980	
9,400.0	7,530.0	9,582.5	7,770.0	44.5	41.8	-133.83	-1,623.8	-1,424.5	346.6	294.7	51.88	6.680	
9,500.0	7,530.0	9,682.5	7,770.0	45.7	43.1	-133.83	-1,723.8	-1,424.5	346.6	292.4	54.14	6.401	
9,600.0	7,530.0	9,782.5	7,770.0	46.9	44.4	-133.83	-1,823.8	-1,424.5	346.6	290.1	56.43	6.142	
9,700.0	7,530.0	9,882.5	7,770.0	48.2	45.7	-133.83	-1,923.8	-1,424.5	346.6	287.8	58.73	5.901	
9,800.0	7,530.0	9,982.5	7,770.0	49.5	47.1	-133.83	-2,023.8	-1,424.5	346.6	285.5	61.06	5.676	
9,900.0	7,530.0	10,082.5	7,770.0	50.8	48.5	-133.83	-2,123.8	-1,424.5	346.6	283.2	63.40	5.467	
10,000.0	7,530.0	10,182.5	7,770.0	52.2	49.9	-133.83	-2,223.8	-1,424.5	346.6	280.8	65.75	5.271	
10,100.0	7,530.0	10,282.5	7,770.0	53.5	51.4	-133.83	-2,323.8	-1,424.5	346.6	278.4	68.12	5.087	
10,200.0	7,530.0	10,382.5	7,770.0	54.9	52.8	-133.83	-2,423.8	-1,424.5	346.6	276.1	70.50	4.915	
10,300.0	7,530.0	10,482.5	7,770.0	56.3	54.3	-133.83	-2,523.8	-1,424.5	346.6	273.7	72.90	4.754	
10,400.0	7,530.0	10,582.5	7,770.0	57.8	55.8	-133.83	-2,623.8	-1,424.5	346.6	271.3	75.30	4.602	
10,500.0	7,530.0	10,682.5	7,770.0	59.2	57.3	-133.83	-2,723.8	-1,424.5	346.6	268.8	77.71	4.460	
10,600.0	7,530.0	10,782.5	7,770.0	60.7	58.8	-133.83	-2,823.8	-1,424.5	346.6	266.4	80.13	4.325	
10,700.0	7,530.0	10,882.5	7,770.0	62.2	60.4	-133.83	-2,923.8	-1,424.5	346.6	264.0	82.56	4.198	
10,800.0	7,530.0	10,982.5	7,770.0	63.7	61.9	-133.83	-3,023.8	-1,424.5	346.6	261.6	85.00	4.077	
10,900.0	7,530.0	11,082.5	7,770.0	65.2	63.5	-133.83	-3,123.8	-1,424.5	346.6	259.1	87.44	3.964	
11,000.0	7,530.0	11,182.5	7,770.0	66.7	65.0	-133.83	-3,223.8	-1,424.5	346.6	256.7	89.88	3.856	
11,100.0	7,530.0	11,282.5	7,770.0	68.3	66.6	-133.83	-3,323.8	-1,424.5	346.6	254.2	92.33	3.753	
11,200.0	7,530.0	11,382.5	7,770.0	69.8	68.2	-133.83	-3,423.8	-1,424.5	346.6	251.8	94.79	3.656	
11,300.0	7,530.0	11,482.5	7,770.0	71.4	69.8	-133.83	-3,523.8	-1,424.5	346.6	249.3	97.25	3.563	
11,400.0	7,530.0	11,582.5	7,770.0	72.9	71.4	-133.83	-3,623.8	-1,424.5	346.6	246.8	99.72	3.475	
11,500.0	7,530.0	11,682.5	7,770.0	74.5	73.0	-133.83	-3,723.8	-1,424.5	346.6	244.4	102.19	3.391	
11,600.0	7,530.0	11,782.5	7,770.0	76.1	74.6	-133.83	-3,823.8	-1,424.5	346.6	241.9	104.66	3.311	
11,700.0	7,530.0	11,882.5	7,770.0	77.7	76.2	-133.83	-3,923.8	-1,424.5	346.6	239.4	107.14	3.235	
11,800.0	7,530.0	11,982.5	7,770.0	79.3	77.8	-133.83	-4,023.8	-1,424.5	346.6	236.9	109.62	3.162	
11,900.0	7,530.0	12,082.5	7,770.0	80.9	79.5	-133.83	-4,123.8	-1,424.5	346.6	234.5	112.10	3.092	
12,000.0	7,530.0	12,182.5	7,770.0	82.5	81.1	-133.83	-4,223.8	-1,424.5	346.6	232.0	114.59	3.024	
12,100.0	7,530.0	12,282.5	7,770.0	84.1	82.8	-133.83	-4,323.8	-1,424.5	346.6	229.5	117.07	2.960	
12,200.0	7,530.0	12,382.5	7,770.0	85.7	84.4	-133.83	-4,423.8	-1,424.5	346.6	227.0	119.56	2.899	
12,300.0	7,530.0	12,482.5	7,770.0	87.3	86.1	-133.83	-4,523.8	-1,424.5	346.6	224.5	122.06	2.839	
12,400.0	7,530.0	12,582.5	7,770.0	89.0	87.7	-133.83	-4,623.8	-1,424.5	346.6	222.0	124.55	2.782	
12,500.0	7,530.0	12,682.5	7,770.0	90.6	89.4	-133.83	-4,723.8	-1,424.5	346.6	219.5	127.05	2.728	
12,600.0	7,530.0	12,782.5	7,770.0	92.2	91.0	-133.83	-4,823.8	-1,424.5	346.6	217.0	129.55	2.675	
12,700.0	7,530.0	12,882.5	7,770.0	93.9	92.7	-133.83	-4,923.8	-1,424.5	346.6	214.5	132.05	2.625	
12,800.0	7,530.0	12,982.5	7,770.0	95.5	94.4	-133.83	-5,023.8	-1,424.5	346.6	212.0	134.55	2.576	
12,900.0	7,530.0	13,082.5	7,770.0	97.2	96.0	-133.83	-5,123.8	-1,424.5	346.6	209.5	137.05	2.529	
13,000.0	7,530.0	13,182.5	7,770.0	98.8	97.7	-133.83	-5,223.8	-1,424.5	346.6	207.0	139.56	2.483	
13,100.0	7,530.0	13,282.5	7,770.0	100.5	99.4	-133.83	-5,323.8	-1,424.5	346.6	204.5	142.07	2.439	
13,200.0	7,530.0	13,382.5	7,770.0	102.1	101.1	-133.83	-5,423.8	-1,424.5	346.6	202.0	144.57	2.397	
13,300.0	7,530.0	13,482.5	7,770.0	103.8	102.8	-133.83	-5,523.8	-1,424.5	346.6	199.5	147.08	2.356	
13,400.0	7,530.0	13,582.5	7,770.0	105.5	104.4	-133.83	-5,623.8	-1,424.5	346.6	197.0	149.59	2.317	
13,500.0	7,530.0	13,682.5	7,770.0	107.1	106.1	-133.83	-5,723.8	-1,424.5	346.6	194.5	152.10	2.278	
13,600.0	7,530.0	13,782.5	7,770.0	108.8	107.8	-133.83	-5,823.8	-1,424.5	346.6	191.9	154.62	2.241	
13,700.0	7,530.0	13,882.5	7,770.0	110.5	109.5	-133.83	-5,923.8	-1,424.5	346.6	189.4	157.13	2.206	
13,800.0	7,530.0	13,982.5	7,770.0	112.2	111.2	-133.83	-6,023.8	-1,424.5	346.6	186.9	159.65	2.171	
13,900.0	7,530.0	14,082.5	7,770.0	113.9	112.9	-133.83	-6,123.8	-1,424.5	346.6	184.4	162.16	2.137	
14,000.0	7,530.0	14,182.5	7,770.0	115.5	114.6	-133.83	-6,223.8	-1,424.5	346.6	181.9	164.68	2.104	
14,100.0	7,530.0	14,282.5	7,770.0	117.2	116.3	-133.83	-6,323.8	-1,424.5	346.6	179.4	167.20	2.073	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1B-7H-A168 - HZ - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
14,200.0	7,530.0	14,382.5	7,770.0	118.9	118.0	-133.83	-6,423.8	-1,424.5	346.6	176.8	169.71	2.042	
14,300.0	7,530.0	14,482.5	7,770.0	120.6	119.7	-133.83	-6,523.8	-1,424.5	346.6	174.3	172.23	2.012	
14,400.0	7,530.0	14,582.5	7,770.0	122.3	121.4	-133.83	-6,623.8	-1,424.5	346.6	171.8	174.75	1.983	
14,500.0	7,530.0	14,682.5	7,770.0	124.0	123.1	-133.83	-6,723.8	-1,424.5	346.6	169.3	177.27	1.955	
14,600.0	7,530.0	14,782.5	7,770.0	125.7	124.8	-133.83	-6,823.8	-1,424.5	346.6	166.8	179.79	1.928	
14,700.0	7,530.0	14,882.5	7,770.0	127.4	126.5	-133.83	-6,923.8	-1,424.5	346.6	164.2	182.32	1.901	
14,800.0	7,530.0	14,982.5	7,770.0	129.1	128.2	-133.83	-7,023.8	-1,424.5	346.6	161.7	184.84	1.875	
14,900.0	7,530.0	15,082.5	7,770.0	130.8	129.9	-133.83	-7,123.8	-1,424.5	346.6	159.2	187.36	1.850	
15,000.0	7,530.0	15,182.5	7,770.0	132.5	131.7	-133.83	-7,223.8	-1,424.5	346.6	156.7	189.89	1.825	
15,100.0	7,530.0	15,282.5	7,770.0	134.2	133.4	-133.83	-7,323.8	-1,424.5	346.6	154.2	192.41	1.801	
15,200.0	7,530.0	15,382.5	7,770.0	135.9	135.1	-133.83	-7,423.8	-1,424.5	346.6	151.6	194.93	1.778	
15,300.0	7,530.0	15,482.5	7,770.0	137.6	136.8	-133.83	-7,523.8	-1,424.5	346.6	149.1	197.46	1.755	
15,400.0	7,530.0	15,582.5	7,770.0	139.3	138.5	-133.83	-7,623.8	-1,424.5	346.6	146.6	199.99	1.733	
15,500.0	7,530.0	15,682.5	7,770.0	141.0	140.2	-133.83	-7,723.8	-1,424.5	346.6	144.1	202.51	1.711	
15,600.0	7,530.0	15,782.5	7,770.0	142.7	141.9	-133.83	-7,823.8	-1,424.5	346.6	141.5	205.04	1.690	
15,700.0	7,530.0	15,882.5	7,770.0	144.4	143.7	-133.83	-7,923.8	-1,424.5	346.6	139.0	207.57	1.670	
15,800.0	7,530.0	15,982.5	7,770.0	146.1	145.4	-133.83	-8,023.8	-1,424.5	346.6	136.5	210.09	1.650	
15,900.0	7,530.0	16,082.5	7,770.0	147.8	147.1	-133.83	-8,123.8	-1,424.5	346.6	133.9	212.62	1.630	
16,000.0	7,530.0	16,182.5	7,770.0	149.5	148.8	-133.83	-8,223.8	-1,424.5	346.6	131.4	215.15	1.611	
16,100.0	7,530.0	16,282.5	7,770.0	151.2	150.5	-133.83	-8,323.8	-1,424.5	346.6	128.9	217.68	1.592	
16,200.0	7,530.0	16,382.5	7,770.0	153.0	152.3	-133.83	-8,423.8	-1,424.5	346.6	126.4	220.21	1.574	
16,300.0	7,530.0	16,482.5	7,770.0	154.7	154.0	-133.83	-8,523.8	-1,424.5	346.6	123.8	222.74	1.556	
16,400.0	7,530.0	16,582.5	7,770.0	156.4	155.7	-133.83	-8,623.8	-1,424.5	346.6	121.3	225.27	1.538	
16,500.0	7,530.0	16,682.5	7,770.0	158.1	157.4	-133.83	-8,723.8	-1,424.5	346.6	118.8	227.80	1.521	
16,600.0	7,530.0	16,782.5	7,770.0	159.8	159.2	-133.83	-8,823.8	-1,424.5	346.6	116.2	230.33	1.505	
16,700.0	7,530.0	16,882.5	7,770.0	161.5	160.9	-133.83	-8,923.8	-1,424.5	346.6	113.7	232.86	1.488	Level 3
16,800.0	7,530.0	16,982.5	7,770.0	163.3	162.6	-133.83	-9,023.8	-1,424.5	346.6	111.2	235.39	1.472	Level 3
16,900.0	7,530.0	17,082.5	7,770.0	165.0	164.3	-133.83	-9,123.8	-1,424.5	346.6	108.6	237.92	1.457	Level 3
17,000.0	7,530.0	17,182.5	7,770.0	166.7	166.1	-133.83	-9,223.8	-1,424.5	346.6	106.1	240.45	1.441	Level 3
17,100.0	7,530.0	17,282.5	7,770.0	168.4	167.8	-133.83	-9,323.8	-1,424.5	346.6	103.6	242.99	1.426	Level 3
17,200.0	7,530.0	17,382.5	7,770.0	170.1	169.5	-133.83	-9,423.8	-1,424.5	346.6	101.0	245.52	1.412	Level 3
17,300.0	7,530.0	17,482.5	7,770.0	171.9	171.2	-133.83	-9,523.8	-1,424.5	346.6	98.5	248.05	1.397	Level 3
17,400.0	7,530.0	17,582.5	7,770.0	173.6	173.0	-133.83	-9,623.8	-1,424.5	346.6	96.0	250.59	1.383	Level 3
17,500.0	7,530.0	17,682.5	7,770.0	175.3	174.7	-133.83	-9,723.8	-1,424.5	346.6	93.4	253.12	1.369	Level 3
17,589.7	7,530.0	17,772.2	7,770.0	176.9	176.3	-133.83	-9,813.6	-1,424.5	346.6	91.2	255.39	1.357	Level 3, SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1C-7H-A168 - HZ - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	91.04	-0.4	20.1	20.2				
100.0	100.0	99.0	99.0	0.2	0.2	91.04	-0.4	20.1	20.2	19.9	0.30	66.695	
200.0	200.0	199.0	199.0	0.3	0.3	91.04	-0.4	20.1	20.2	19.5	0.65	30.957	CC, ES
300.0	300.0	299.0	299.0	0.5	0.5	168.60	-0.4	20.1	21.0	20.0	1.00	21.007	
400.0	400.0	399.3	399.3	0.7	0.7	169.27	-0.1	19.3	22.8	21.4	1.35	16.861	
500.0	499.9	499.7	499.7	0.9	0.9	169.44	0.7	16.9	24.5	22.8	1.70	14.439	
600.0	599.7	600.1	600.0	1.1	1.0	169.21	2.1	12.7	26.4	24.3	2.05	12.855	
700.0	699.4	700.6	700.2	1.3	1.2	168.66	4.1	6.9	28.2	25.8	2.40	11.740	
800.0	798.9	801.0	800.4	1.5	1.5	167.86	6.6	-0.6	30.1	27.3	2.76	10.913	
900.0	898.3	901.5	900.4	1.8	1.7	166.84	9.7	-9.7	32.0	28.9	3.12	10.273	
1,000.0	997.4	1,002.1	1,000.3	2.0	1.9	165.66	13.4	-20.6	34.0	30.5	3.49	9.758	
1,100.0	1,096.3	1,102.6	1,100.0	2.3	2.2	164.34	17.6	-33.0	36.1	32.2	3.87	9.330	
1,200.0	1,194.9	1,203.2	1,199.5	2.7	2.5	162.91	22.3	-47.2	38.2	33.9	4.26	8.960	
1,300.0	1,293.3	1,303.8	1,298.7	3.0	2.8	161.39	27.7	-63.0	40.4	35.7	4.68	8.629	
1,400.0	1,391.2	1,403.8	1,397.1	3.4	3.1	160.21	33.3	-79.7	43.2	38.1	5.11	8.467	
1,500.0	1,488.9	1,503.7	1,495.5	3.8	3.5	159.91	38.9	-96.4	47.8	42.2	5.53	8.635	
1,600.0	1,586.1	1,603.5	1,593.7	4.3	3.8	160.29	44.6	-113.0	53.9	48.0	5.94	9.077	
1,659.9	1,644.1	1,663.3	1,652.5	4.5	4.0	160.75	47.9	-123.0	58.4	52.2	6.18	9.455	
1,700.0	1,683.0	1,703.2	1,691.8	4.7	4.2	161.10	50.2	-129.7	61.6	55.3	6.33	9.723	
1,800.0	1,779.7	1,802.9	1,790.0	5.2	4.5	161.82	55.8	-146.4	69.6	62.8	6.73	10.336	
1,900.0	1,876.5	1,902.6	1,888.1	5.6	4.9	162.39	61.4	-163.0	77.6	70.4	7.13	10.881	
2,000.0	1,973.3	2,002.3	1,986.2	6.1	5.2	162.85	67.0	-179.7	85.6	78.0	7.53	11.369	
2,100.0	2,070.0	2,101.9	2,084.3	6.6	5.5	163.24	72.6	-196.3	93.6	85.6	7.92	11.807	
2,200.0	2,166.8	2,201.6	2,182.4	7.1	5.9	163.57	78.3	-213.0	101.6	93.2	8.32	12.203	
2,300.0	2,263.6	2,301.3	2,280.5	7.5	6.2	163.84	83.9	-229.7	109.6	100.8	8.72	12.563	
2,400.0	2,360.4	2,401.0	2,378.7	8.0	6.6	164.08	89.5	-246.3	117.6	108.4	9.12	12.891	
2,500.0	2,457.1	2,500.7	2,476.8	8.5	7.0	164.29	95.1	-263.0	125.6	116.0	9.52	13.192	
2,600.0	2,553.9	2,600.3	2,574.9	9.0	7.3	164.47	100.7	-279.7	133.6	123.7	9.92	13.468	
2,700.0	2,650.7	2,700.0	2,673.0	9.4	7.7	164.64	106.3	-296.3	141.6	131.3	10.32	13.723	
2,800.0	2,747.4	2,799.7	2,771.1	9.9	8.0	164.78	112.0	-313.0	149.6	138.9	10.72	13.959	
2,900.0	2,844.2	2,899.4	2,869.2	10.4	8.4	164.91	117.6	-329.6	157.6	146.5	11.12	14.177	
3,000.0	2,941.0	2,999.0	2,967.3	10.9	8.7	165.03	123.2	-346.3	165.6	154.1	11.52	14.381	
3,100.0	3,037.8	3,098.7	3,065.5	11.4	9.1	165.14	128.8	-363.0	173.6	161.7	11.92	14.570	
3,200.0	3,134.5	3,198.4	3,163.6	11.9	9.4	165.24	134.4	-379.6	181.7	169.3	12.32	14.748	
3,300.0	3,231.3	3,298.1	3,261.7	12.3	9.8	165.33	140.1	-396.3	189.7	176.9	12.72	14.914	
3,400.0	3,328.1	3,397.8	3,359.8	12.8	10.1	165.41	145.7	-412.9	197.7	184.6	13.12	15.070	
3,500.0	3,424.8	3,497.4	3,457.9	13.3	10.5	165.49	151.3	-429.6	205.7	192.2	13.52	15.216	
3,600.0	3,521.6	3,597.1	3,556.0	13.8	10.8	165.56	156.9	-446.3	213.7	199.8	13.92	15.355	
3,700.0	3,618.4	3,696.8	3,654.1	14.3	11.2	165.62	162.5	-462.9	221.7	207.4	14.32	15.485	
3,800.0	3,715.2	3,796.5	3,752.3	14.7	11.5	165.68	168.1	-479.6	229.7	215.0	14.72	15.608	
3,900.0	3,811.9	3,896.2	3,850.4	15.2	11.9	165.74	173.8	-496.2	237.8	222.6	15.12	15.725	
4,000.0	3,908.7	3,995.8	3,948.5	15.7	12.3	165.79	179.4	-512.9	245.8	230.3	15.52	15.836	
4,100.0	4,005.5	4,095.5	4,046.6	16.2	12.6	165.84	185.0	-529.6	253.8	237.9	15.92	15.941	
4,200.0	4,102.2	4,195.2	4,144.7	16.7	13.0	165.89	190.6	-546.2	261.8	245.5	16.32	16.041	
4,300.0	4,199.0	4,294.9	4,242.8	17.2	13.3	165.93	196.2	-562.9	269.8	253.1	16.72	16.136	
4,400.0	4,295.8	4,394.5	4,341.0	17.6	13.7	165.97	201.9	-579.5	277.8	260.7	17.12	16.226	
4,500.0	4,392.6	4,494.2	4,439.1	18.1	14.0	166.01	207.5	-596.2	285.9	268.3	17.52	16.313	
4,600.0	4,489.3	4,593.9	4,537.2	18.6	14.4	166.05	213.1	-612.9	293.9	276.0	17.92	16.395	
4,700.0	4,586.1	4,693.6	4,635.3	19.1	14.7	166.08	218.7	-629.5	301.9	283.6	18.33	16.474	
4,800.0	4,682.9	4,793.3	4,733.4	19.6	15.1	166.11	224.3	-646.2	309.9	291.2	18.73	16.550	
4,900.0	4,779.6	4,892.9	4,831.5	20.1	15.5	166.15	229.9	-662.8	317.9	298.8	19.13	16.622	
5,000.0	4,876.4	4,992.6	4,929.6	20.6	15.8	166.18	235.6	-679.5	326.0	306.4	19.53	16.692	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1C-7H-A168 - HZ - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,100.0	4,973.2	5,092.3	5,027.8	21.0	16.2	166.20	241.2	-696.2	334.0	314.0	19.93	16.758	
5,200.0	5,070.0	5,192.0	5,125.9	21.5	16.5	166.23	246.8	-712.8	342.0	321.7	20.33	16.822	
5,300.0	5,166.7	5,291.6	5,224.0	22.0	16.9	166.26	252.4	-729.5	350.0	329.3	20.73	16.884	
5,400.0	5,263.5	5,391.3	5,322.1	22.5	17.2	166.28	258.0	-746.1	358.0	336.9	21.13	16.943	
5,500.0	5,360.3	5,491.0	5,420.2	23.0	17.6	166.31	263.7	-762.8	366.0	344.5	21.53	17.000	
5,600.0	5,457.0	5,590.7	5,518.3	23.5	17.9	166.33	269.3	-779.5	374.1	352.1	21.93	17.054	
5,700.0	5,553.8	5,690.4	5,616.4	23.9	18.3	166.35	274.9	-796.1	382.1	359.7	22.33	17.107	
5,800.0	5,650.6	5,790.0	5,714.6	24.4	18.7	166.37	280.5	-812.8	390.1	367.4	22.74	17.158	
5,900.0	5,747.4	5,889.7	5,812.7	24.9	19.0	166.39	286.1	-829.4	398.1	375.0	23.14	17.207	
6,000.0	5,844.1	5,989.4	5,910.8	25.4	19.4	166.41	291.7	-846.1	406.1	382.6	23.54	17.255	
6,100.0	5,940.9	6,089.1	6,008.9	25.9	19.7	166.43	297.4	-862.8	414.2	390.2	23.94	17.301	
6,200.0	6,037.7	6,188.7	6,107.0	26.4	20.1	166.44	303.0	-879.4	422.2	397.8	24.34	17.345	
6,300.0	6,134.4	6,288.4	6,205.1	26.8	20.4	166.46	308.6	-896.1	430.2	405.5	24.74	17.388	
6,400.0	6,231.2	6,388.1	6,303.3	27.3	20.8	166.48	314.2	-912.7	438.2	413.1	25.14	17.430	
6,500.0	6,328.0	6,487.8	6,401.4	27.8	21.1	166.49	319.8	-929.4	446.2	420.7	25.54	17.470	
6,600.0	6,424.8	6,587.5	6,499.5	28.3	21.5	166.51	325.5	-946.1	454.2	428.3	25.94	17.509	
6,700.0	6,521.5	6,687.1	6,597.6	28.8	21.9	166.52	331.1	-962.7	462.3	435.9	26.34	17.547	
6,800.0	6,618.3	6,786.8	6,695.7	29.3	22.2	166.54	336.7	-979.4	470.3	443.5	26.75	17.584	
6,900.0	6,715.1	6,886.6	6,793.9	29.8	22.6	166.56	342.3	-996.1	478.3	451.2	27.14	17.622	
6,984.3	6,796.7	6,971.1	6,877.2	30.2	22.8	167.29	340.9	-1,010.2	485.0	457.8	27.15	17.861	
7,000.0	6,811.9	6,986.6	6,892.4	30.2	22.9	172.40	339.6	-1,012.8	486.3	459.2	27.08	17.958	
7,050.0	6,860.3	7,035.8	6,940.5	30.5	23.0	-170.87	333.2	-1,021.0	490.3	463.5	26.81	18.286	
7,100.0	6,908.6	7,084.5	6,987.6	30.7	23.1	-155.28	323.6	-1,029.1	494.4	467.8	26.55	18.619	
7,150.0	6,956.6	7,132.9	7,033.5	30.9	23.2	-142.28	310.8	-1,037.0	498.5	472.2	26.32	18.944	
7,200.0	7,004.0	7,180.9	7,078.2	31.1	23.3	-132.06	295.1	-1,044.7	502.7	476.5	26.12	19.246	
7,250.0	7,050.6	7,228.5	7,121.4	31.2	23.4	-124.14	276.5	-1,052.1	506.8	480.8	25.97	19.513	
7,300.0	7,096.1	7,275.8	7,163.0	31.4	23.4	-117.96	255.2	-1,059.3	510.8	484.9	25.88	19.736	
7,350.0	7,140.4	7,322.7	7,202.8	31.6	23.5	-113.04	231.4	-1,066.2	514.8	488.9	25.86	19.907	
7,400.0	7,183.1	7,369.4	7,240.8	31.7	23.6	-109.05	205.1	-1,072.8	518.6	492.7	25.90	20.023	
7,450.0	7,224.2	7,415.7	7,276.8	31.8	23.6	-105.77	176.6	-1,079.1	522.4	496.4	26.01	20.083	
7,500.0	7,263.4	7,461.8	7,310.7	32.0	23.7	-103.02	146.0	-1,085.0	526.0	499.8	26.18	20.090	
7,550.0	7,300.5	7,507.7	7,342.4	32.1	23.8	-100.71	113.3	-1,090.6	529.4	503.0	26.40	20.049	
7,600.0	7,335.4	7,553.3	7,371.9	32.2	23.8	-98.73	78.9	-1,095.7	532.6	505.9	26.67	19.965	
7,650.0	7,367.8	7,600.0	7,399.7	32.4	23.9	-97.03	41.8	-1,100.7	535.5	508.5	26.99	19.841	
7,700.0	7,397.6	7,644.0	7,423.7	32.5	24.0	-95.60	5.2	-1,105.0	538.3	510.9	27.33	19.698	
7,750.0	7,424.7	7,689.0	7,446.0	32.6	24.1	-94.36	-33.8	-1,108.9	540.7	513.0	27.70	19.518	
7,800.0	7,448.9	7,733.9	7,465.7	32.8	24.3	-93.31	-74.0	-1,112.5	542.9	514.8	28.11	19.317	
7,850.0	7,470.1	7,778.7	7,482.8	32.9	24.4	-92.43	-115.3	-1,115.6	544.8	516.3	28.52	19.102	
7,900.0	7,488.2	7,823.4	7,497.4	33.1	24.6	-91.70	-157.4	-1,118.3	546.4	517.4	28.95	18.873	
7,950.0	7,503.2	7,868.0	7,509.2	33.2	24.8	-91.12	-200.3	-1,120.6	547.7	518.3	29.39	18.633	
8,000.0	7,514.9	7,912.5	7,518.5	33.4	24.9	-90.67	-243.8	-1,122.4	548.6	518.8	29.85	18.382	
8,050.0	7,523.3	7,956.9	7,525.0	33.6	25.2	-90.36	-287.7	-1,123.7	549.2	518.9	30.31	18.121	
8,100.0	7,528.3	8,000.0	7,528.8	33.8	25.4	-90.17	-330.6	-1,124.6	549.5	518.8	30.78	17.856	
8,149.7	7,530.0	8,045.8	7,530.0	34.0	25.6	-90.10	-376.4	-1,125.0	549.5	518.2	31.28	17.564	
8,200.0	7,530.0	8,096.1	7,530.0	34.2	25.9	-90.10	-426.7	-1,125.3	549.2	517.0	32.25	17.027	
8,300.0	7,530.0	8,196.1	7,530.0	34.7	26.6	-90.10	-526.7	-1,125.8	548.7	514.3	34.38	15.961	
8,400.0	7,530.0	8,296.1	7,530.0	35.3	27.4	-90.10	-626.7	-1,126.3	548.2	511.5	36.71	14.932	
8,500.0	7,530.0	8,396.1	7,530.0	35.9	28.2	-90.10	-726.7	-1,126.9	547.6	508.4	39.22	13.963	
8,600.0	7,530.0	8,496.1	7,530.0	36.6	29.2	-90.10	-826.7	-1,127.4	547.1	505.2	41.87	13.066	
8,700.0	7,530.0	8,596.1	7,530.0	37.4	30.2	-90.10	-926.7	-1,127.9	546.6	502.0	44.64	12.244	
8,800.0	7,530.0	8,696.1	7,530.0	38.3	31.2	-90.10	-1,026.7	-1,128.4	546.1	498.6	47.51	11.493	
8,900.0	7,530.0	8,796.1	7,530.0	39.2	32.4	-90.11	-1,126.7	-1,129.0	545.5	495.1	50.46	10.811	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1C-7H-A168 - HZ - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
9,000.0	7,530.0	8,896.1	7,530.0	40.1	33.6	-90.11	-1,226.7	-1,129.5	545.0	491.5	53.48	10.191	
9,100.0	7,530.0	8,996.1	7,530.0	41.2	34.8	-90.11	-1,326.7	-1,130.0	544.5	487.9	56.55	9.628	
9,200.0	7,530.0	9,096.1	7,530.0	42.2	36.1	-90.11	-1,426.7	-1,130.5	544.0	484.3	59.67	9.116	
9,300.0	7,530.0	9,196.1	7,530.0	43.3	37.4	-90.11	-1,526.7	-1,131.1	543.5	480.6	62.84	8.649	
9,400.0	7,530.0	9,296.1	7,530.0	44.5	38.8	-90.11	-1,626.7	-1,131.6	542.9	476.9	66.03	8.222	
9,500.0	7,530.0	9,396.1	7,530.0	45.7	40.2	-90.11	-1,726.7	-1,132.1	542.4	473.1	69.26	7.831	
9,600.0	7,530.0	9,496.1	7,530.0	46.9	41.6	-90.11	-1,826.7	-1,132.6	541.9	469.4	72.51	7.473	
9,700.0	7,530.0	9,596.1	7,530.0	48.2	43.0	-90.11	-1,926.7	-1,133.1	541.4	465.6	75.79	7.143	
9,800.0	7,530.0	9,696.1	7,530.0	49.5	44.5	-90.11	-2,026.7	-1,133.7	540.8	461.7	79.09	6.838	
9,900.0	7,530.0	9,796.1	7,530.0	50.8	45.9	-90.11	-2,126.6	-1,134.2	540.3	457.9	82.40	6.557	
10,000.0	7,530.0	9,896.1	7,530.0	52.2	47.4	-90.11	-2,226.6	-1,134.7	539.8	454.1	85.73	6.296	
10,100.0	7,530.0	9,996.1	7,530.0	53.5	49.0	-90.11	-2,326.6	-1,135.2	539.3	450.2	89.07	6.054	
10,200.0	7,530.0	10,096.1	7,530.0	54.9	50.5	-90.11	-2,426.6	-1,135.8	538.7	446.3	92.43	5.829	
10,300.0	7,530.0	10,196.1	7,530.0	56.3	52.0	-90.11	-2,526.6	-1,136.3	538.2	442.4	95.79	5.619	
10,400.0	7,530.0	10,296.1	7,530.0	57.8	53.6	-90.11	-2,626.6	-1,136.8	537.7	438.5	99.17	5.422	
10,500.0	7,530.0	10,396.1	7,530.0	59.2	55.2	-90.11	-2,726.6	-1,137.3	537.2	434.6	102.55	5.238	
10,600.0	7,530.0	10,496.1	7,530.0	60.7	56.8	-90.11	-2,826.6	-1,137.9	536.6	430.7	105.95	5.065	
10,700.0	7,530.0	10,596.1	7,530.0	62.2	58.4	-90.11	-2,926.6	-1,138.4	536.1	426.8	109.35	4.903	
10,800.0	7,530.0	10,696.1	7,530.0	63.7	60.0	-90.11	-3,026.6	-1,138.9	535.6	422.8	112.75	4.750	
10,900.0	7,530.0	10,796.1	7,530.0	65.2	61.6	-90.11	-3,126.6	-1,139.4	535.1	418.9	116.17	4.606	
11,000.0	7,530.0	10,896.1	7,530.0	66.7	63.2	-90.11	-3,226.6	-1,140.0	534.6	415.0	119.58	4.470	
11,100.0	7,530.0	10,996.1	7,530.0	68.3	64.8	-90.11	-3,326.6	-1,140.5	534.0	411.0	123.01	4.341	
11,200.0	7,530.0	11,096.1	7,530.0	69.8	66.4	-90.11	-3,426.6	-1,141.0	533.5	407.1	126.44	4.220	
11,300.0	7,530.0	11,196.1	7,530.0	71.4	68.1	-90.11	-3,526.6	-1,141.5	533.0	403.1	129.87	4.104	
11,400.0	7,530.0	11,296.1	7,530.0	72.9	69.7	-90.11	-3,626.6	-1,142.0	532.5	399.2	133.30	3.994	
11,500.0	7,530.0	11,396.1	7,530.0	74.5	71.4	-90.11	-3,726.6	-1,142.6	531.9	395.2	136.74	3.890	
11,600.0	7,530.0	11,496.1	7,530.0	76.1	73.0	-90.11	-3,826.6	-1,143.1	531.4	391.2	140.19	3.791	
11,700.0	7,530.0	11,596.1	7,530.0	77.7	74.7	-90.11	-3,926.6	-1,143.6	530.9	387.3	143.63	3.696	
11,800.0	7,530.0	11,696.1	7,530.0	79.3	76.3	-90.11	-4,026.6	-1,144.1	530.4	383.3	147.08	3.606	
11,900.0	7,530.0	11,796.1	7,530.0	80.9	78.0	-90.11	-4,126.6	-1,144.7	529.8	379.3	150.53	3.520	
12,000.0	7,530.0	11,896.1	7,530.0	82.5	79.7	-90.11	-4,226.6	-1,145.2	529.3	375.3	153.99	3.437	
12,100.0	7,530.0	11,996.0	7,530.0	84.1	81.4	-90.11	-4,326.6	-1,145.7	528.8	371.3	157.45	3.359	
12,200.0	7,530.0	12,096.0	7,530.0	85.7	83.0	-90.11	-4,426.6	-1,146.2	528.3	367.4	160.91	3.283	
12,300.0	7,530.0	12,196.0	7,530.0	87.3	84.7	-90.11	-4,526.6	-1,146.8	527.7	363.4	164.37	3.211	
12,400.0	7,530.0	12,296.0	7,530.0	89.0	86.4	-90.11	-4,626.6	-1,147.3	527.2	359.4	167.83	3.141	
12,500.0	7,530.0	12,396.0	7,530.0	90.6	88.1	-90.11	-4,726.6	-1,147.8	526.7	355.4	171.29	3.075	
12,600.0	7,530.0	12,496.0	7,530.0	92.2	89.8	-90.11	-4,826.6	-1,148.3	526.2	351.4	174.76	3.011	
12,700.0	7,530.0	12,596.0	7,530.0	93.9	91.5	-90.11	-4,926.6	-1,148.8	525.7	347.4	178.23	2.949	
12,800.0	7,530.0	12,696.0	7,530.0	95.5	93.2	-90.11	-5,026.6	-1,149.4	525.1	343.4	181.70	2.890	
12,900.0	7,530.0	12,796.0	7,530.0	97.2	94.9	-90.11	-5,126.6	-1,149.9	524.6	339.4	185.17	2.833	
13,000.0	7,530.0	12,896.0	7,530.0	98.8	96.5	-90.11	-5,226.6	-1,150.4	524.1	335.4	188.64	2.778	
13,100.0	7,530.0	12,996.0	7,530.0	100.5	98.2	-90.11	-5,326.6	-1,150.9	523.6	331.4	192.12	2.725	
13,200.0	7,530.0	13,096.0	7,530.0	102.1	99.9	-90.11	-5,426.6	-1,151.5	523.0	327.4	195.59	2.674	
13,300.0	7,530.0	13,196.0	7,530.0	103.8	101.7	-90.11	-5,526.6	-1,152.0	522.5	323.4	199.07	2.625	
13,400.0	7,530.0	13,296.0	7,530.0	105.5	103.4	-90.11	-5,626.6	-1,152.5	522.0	319.4	202.55	2.577	
13,500.0	7,530.0	13,396.0	7,530.0	107.1	105.1	-90.11	-5,726.5	-1,153.0	521.5	315.4	206.02	2.531	
13,600.0	7,530.0	13,496.0	7,530.0	108.8	106.8	-90.11	-5,826.5	-1,153.6	520.9	311.4	209.50	2.487	
13,700.0	7,530.0	13,596.0	7,530.0	110.5	108.5	-90.11	-5,926.5	-1,154.1	520.4	307.4	212.98	2.443	
13,800.0	7,530.0	13,696.0	7,530.0	112.2	110.2	-90.11	-6,026.5	-1,154.6	519.9	303.4	216.46	2.402	
13,900.0	7,530.0	13,796.0	7,530.0	113.9	111.9	-90.11	-6,126.5	-1,155.1	519.4	299.4	219.95	2.361	
14,000.0	7,530.0	13,896.0	7,530.0	115.5	113.6	-90.11	-6,226.5	-1,155.7	518.8	295.4	223.43	2.322	
14,100.0	7,530.0	13,996.0	7,530.0	117.2	115.3	-90.11	-6,326.5	-1,156.2	518.3	291.4	226.91	2.284	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1C-7H-A168 - HZ - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
14,200.0	7,530.0	14,096.0	7,530.0	118.9	117.0	-90.11	-6,426.5	-1,156.7	517.8	287.4	230.40	2.247	
14,300.0	7,530.0	14,196.0	7,530.0	120.6	118.8	-90.11	-6,526.5	-1,157.2	517.3	283.4	233.88	2.212	
14,400.0	7,530.0	14,296.0	7,530.0	122.3	120.5	-90.11	-6,626.5	-1,157.7	516.8	279.4	237.37	2.177	
14,500.0	7,530.0	14,396.0	7,530.0	124.0	122.2	-90.11	-6,726.5	-1,158.3	516.2	275.4	240.86	2.143	
14,600.0	7,530.0	14,496.0	7,530.0	125.7	123.9	-90.11	-6,826.5	-1,158.8	515.7	271.4	244.34	2.111	
14,700.0	7,530.0	14,596.0	7,530.0	127.4	125.6	-90.11	-6,926.5	-1,159.3	515.2	267.4	247.83	2.079	
14,800.0	7,530.0	14,696.0	7,530.0	129.1	127.4	-90.11	-7,026.5	-1,159.8	514.7	263.3	251.32	2.048	
14,900.0	7,530.0	14,796.0	7,530.0	130.8	129.1	-90.11	-7,126.5	-1,160.4	514.1	259.3	254.81	2.018	
15,000.0	7,530.0	14,896.0	7,530.0	132.5	130.8	-90.11	-7,226.5	-1,160.9	513.6	255.3	258.30	1.988	
15,100.0	7,530.0	14,996.0	7,530.0	134.2	132.5	-90.11	-7,326.5	-1,161.4	513.1	251.3	261.79	1.960	
15,200.0	7,530.0	15,096.0	7,530.0	135.9	134.3	-90.11	-7,426.5	-1,161.9	512.6	247.3	265.28	1.932	
15,300.0	7,530.0	15,196.0	7,530.0	137.6	136.0	-90.11	-7,526.5	-1,162.5	512.0	243.3	268.77	1.905	
15,400.0	7,530.0	15,296.0	7,530.0	139.3	137.7	-90.11	-7,626.5	-1,163.0	511.5	239.3	272.26	1.879	
15,500.0	7,530.0	15,396.0	7,530.0	141.0	139.4	-90.11	-7,726.5	-1,163.5	511.0	235.2	275.75	1.853	
15,600.0	7,530.0	15,496.0	7,530.0	142.7	141.2	-90.11	-7,826.5	-1,164.0	510.5	231.2	279.24	1.828	
15,700.0	7,530.0	15,596.0	7,530.0	144.4	142.9	-90.11	-7,926.5	-1,164.6	509.9	227.2	282.73	1.804	
15,800.0	7,530.0	15,696.0	7,530.0	146.1	144.6	-90.11	-8,026.5	-1,165.1	509.4	223.2	286.23	1.780	
15,900.0	7,530.0	15,796.0	7,530.0	147.8	146.4	-90.11	-8,126.5	-1,165.6	508.9	219.2	289.72	1.757	
16,000.0	7,530.0	15,896.0	7,530.0	149.5	148.1	-90.11	-8,226.5	-1,166.1	508.4	215.2	293.21	1.734	
16,100.0	7,530.0	15,996.0	7,530.0	151.2	149.8	-90.11	-8,326.5	-1,166.6	507.9	211.1	296.71	1.712	
16,200.0	7,530.0	16,096.0	7,530.0	153.0	151.6	-90.11	-8,426.5	-1,167.2	507.3	207.1	300.20	1.690	
16,300.0	7,530.0	16,196.0	7,530.0	154.7	153.3	-90.11	-8,526.5	-1,167.7	506.8	203.1	303.70	1.669	
16,400.0	7,530.0	16,296.0	7,530.0	156.4	155.0	-90.11	-8,626.5	-1,168.2	506.3	199.1	307.19	1.648	
16,500.0	7,530.0	16,396.0	7,530.0	158.1	156.8	-90.11	-8,726.5	-1,168.7	505.8	195.1	310.69	1.628	
16,600.0	7,530.0	16,496.0	7,530.0	159.8	158.5	-90.11	-8,826.5	-1,169.3	505.2	191.1	314.18	1.608	
16,700.0	7,530.0	16,596.0	7,530.0	161.5	160.2	-90.11	-8,926.5	-1,169.8	504.7	187.0	317.68	1.589	
16,800.0	7,530.0	16,696.0	7,530.0	163.3	162.0	-90.11	-9,026.5	-1,170.3	504.2	183.0	321.17	1.570	
16,900.0	7,530.0	16,796.0	7,530.0	165.0	163.7	-90.11	-9,126.5	-1,170.8	503.7	179.0	324.67	1.551	
17,000.0	7,530.0	16,896.0	7,530.0	166.7	165.4	-90.11	-9,226.5	-1,171.4	503.1	175.0	328.17	1.533	
17,100.0	7,530.0	16,996.0	7,530.0	168.4	167.2	-90.11	-9,326.5	-1,171.9	502.6	171.0	331.66	1.515	
17,200.0	7,530.0	17,096.0	7,530.0	170.1	168.9	-90.11	-9,426.4	-1,172.4	502.1	166.9	335.16	1.498	Level 3
17,300.0	7,530.0	17,196.0	7,530.0	171.9	170.6	-90.11	-9,526.4	-1,172.9	501.6	162.9	338.66	1.481	Level 3
17,400.0	7,530.0	17,296.0	7,530.0	173.6	172.4	-90.11	-9,626.4	-1,173.5	501.0	158.9	342.15	1.464	Level 3
17,500.0	7,530.0	17,396.0	7,530.0	175.3	174.1	-90.11	-9,726.4	-1,174.0	500.5	154.9	345.65	1.448	Level 3
17,589.7	7,530.0	17,485.7	7,530.0	176.9	175.7	-90.11	-9,816.2	-1,174.4	500.1	151.3	348.79	1.434	Level 3, SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1D-7H-A168 - HZ - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	90.70	-0.4	29.9	30.0				
100.0	100.0	99.0	99.0	0.2	0.2	90.70	-0.4	29.9	29.9	29.6	0.30	99.107	
200.0	200.0	199.0	199.0	0.3	0.3	90.70	-0.4	29.9	29.9	29.3	0.65	46.001	CC, ES
300.0	300.0	299.0	299.0	0.5	0.5	168.12	-0.4	29.9	30.8	29.8	1.00	30.800	
400.0	400.0	399.2	399.2	0.7	0.7	168.92	-0.3	29.7	33.2	31.8	1.35	24.581	
500.0	499.9	499.8	499.7	0.9	0.9	169.30	0.4	28.1	35.8	34.1	1.70	21.078	
600.0	599.7	600.3	600.3	1.1	1.0	169.24	1.7	24.9	38.5	36.5	2.05	18.795	
700.0	699.4	701.0	700.7	1.3	1.2	168.82	3.6	20.0	41.3	38.9	2.40	17.193	
800.0	798.9	801.6	801.2	1.5	1.4	168.10	6.3	13.4	44.2	41.4	2.76	16.008	
900.0	898.3	902.3	901.5	1.8	1.6	167.15	9.5	5.3	47.1	43.9	3.12	15.094	
1,000.0	997.4	1,003.1	1,001.7	2.0	1.9	166.00	13.5	-4.6	50.1	46.6	3.49	14.362	
1,100.0	1,096.3	1,103.8	1,101.7	2.3	2.1	164.70	18.1	-16.0	53.2	49.3	3.87	13.754	
1,200.0	1,194.9	1,204.5	1,201.3	2.7	2.4	163.30	23.3	-29.1	56.4	52.1	4.26	13.241	
1,300.0	1,293.3	1,304.4	1,300.2	3.0	2.7	162.31	28.7	-42.5	60.8	56.1	4.66	13.048	
1,400.0	1,391.2	1,404.2	1,398.9	3.4	3.0	161.93	34.1	-56.0	66.9	61.8	5.06	13.213	
1,500.0	1,488.9	1,503.9	1,497.6	3.8	3.3	162.02	39.5	-69.4	74.6	69.2	5.46	13.667	
1,600.0	1,586.1	1,603.4	1,596.1	4.3	3.6	162.46	44.9	-82.9	84.0	78.2	5.85	14.360	
1,659.9	1,644.1	1,663.0	1,655.0	4.5	3.8	162.83	48.1	-90.9	90.4	84.3	6.08	14.873	
1,700.0	1,683.0	1,702.8	1,694.4	4.7	3.9	163.10	50.2	-96.3	94.9	88.7	6.24	15.223	
1,800.0	1,779.7	1,802.2	1,792.7	5.2	4.2	163.67	55.6	-109.7	106.2	99.5	6.63	16.024	
1,900.0	1,876.5	1,901.6	1,891.0	5.6	4.5	164.13	61.0	-123.1	117.4	110.4	7.01	16.736	
2,000.0	1,973.3	2,000.9	1,989.3	6.1	4.8	164.51	66.3	-136.5	128.6	121.2	7.40	17.374	
2,100.0	2,070.0	2,100.3	2,087.6	6.6	5.1	164.83	71.7	-149.9	139.9	132.1	7.79	17.948	
2,200.0	2,166.8	2,199.7	2,185.9	7.1	5.4	165.10	77.1	-163.3	151.1	143.0	8.18	18.467	
2,300.0	2,263.6	2,299.0	2,284.2	7.5	5.7	165.33	82.5	-176.7	162.4	153.8	8.58	18.939	
2,400.0	2,360.4	2,398.4	2,382.6	8.0	6.0	165.54	87.8	-190.1	173.7	164.7	8.97	19.370	
2,500.0	2,457.1	2,497.7	2,480.9	8.5	6.3	165.71	93.2	-203.5	184.9	175.6	9.36	19.765	
2,600.0	2,553.9	2,597.1	2,579.2	9.0	6.6	165.87	98.6	-216.9	196.2	186.4	9.75	20.128	
2,700.0	2,650.7	2,696.5	2,677.5	9.4	6.9	166.01	104.0	-230.3	207.4	197.3	10.14	20.463	
2,800.0	2,747.4	2,795.8	2,775.8	9.9	7.2	166.14	109.3	-243.7	218.7	208.2	10.53	20.773	
2,900.0	2,844.2	2,895.2	2,874.1	10.4	7.5	166.25	114.7	-257.1	230.0	219.1	10.92	21.061	
3,000.0	2,941.0	2,994.6	2,972.4	10.9	7.8	166.36	120.1	-270.5	241.2	229.9	11.31	21.329	
3,100.0	3,037.8	3,093.9	3,070.7	11.4	8.1	166.45	125.4	-283.9	252.5	240.8	11.70	21.579	
3,200.0	3,134.5	3,193.3	3,169.0	11.9	8.4	166.54	130.8	-297.3	263.8	251.7	12.09	21.813	
3,300.0	3,231.3	3,292.6	3,267.3	12.3	8.7	166.62	136.2	-310.7	275.0	262.6	12.48	22.032	
3,400.0	3,328.1	3,392.0	3,365.6	12.8	9.0	166.69	141.6	-324.1	286.3	273.4	12.88	22.238	
3,500.0	3,424.8	3,491.4	3,463.9	13.3	9.3	166.76	146.9	-337.5	297.6	284.3	13.27	22.431	
3,600.0	3,521.6	3,590.7	3,562.2	13.8	9.6	166.82	152.3	-350.9	308.9	295.2	13.66	22.614	
3,700.0	3,618.4	3,690.1	3,660.6	14.3	9.9	166.88	157.7	-364.3	320.1	306.1	14.05	22.786	
3,800.0	3,715.2	3,789.5	3,758.9	14.7	10.3	166.93	163.0	-377.7	331.4	317.0	14.44	22.949	
3,900.0	3,811.9	3,888.8	3,857.2	15.2	10.6	166.98	168.4	-391.1	342.7	327.8	14.83	23.104	
4,000.0	3,908.7	3,988.2	3,955.5	15.7	10.9	167.03	173.8	-404.5	353.9	338.7	15.22	23.250	
4,100.0	4,005.5	4,087.5	4,053.8	16.2	11.2	167.08	179.2	-417.9	365.2	349.6	15.61	23.389	
4,200.0	4,102.2	4,186.9	4,152.1	16.7	11.5	167.12	184.5	-431.3	376.5	360.5	16.01	23.521	
4,300.0	4,199.0	4,286.3	4,250.4	17.2	11.8	167.16	189.9	-444.7	387.7	371.3	16.40	23.647	
4,400.0	4,295.8	4,385.6	4,348.7	17.6	12.1	167.19	195.3	-458.1	399.0	382.2	16.79	23.767	
4,500.0	4,392.6	4,485.0	4,447.0	18.1	12.4	167.23	200.6	-471.5	410.3	393.1	17.18	23.882	
4,600.0	4,489.3	4,584.4	4,545.3	18.6	12.7	167.26	206.0	-484.9	421.6	404.0	17.57	23.991	
4,700.0	4,586.1	4,683.7	4,643.6	19.1	13.0	167.29	211.4	-498.3	432.8	414.9	17.96	24.096	
4,800.0	4,682.9	4,783.1	4,741.9	19.6	13.3	167.32	216.8	-511.7	444.1	425.7	18.35	24.196	
4,900.0	4,779.6	4,882.4	4,840.3	20.1	13.6	167.35	222.1	-525.1	455.4	436.6	18.75	24.292	
5,000.0	4,876.4	4,981.8	4,938.6	20.6	13.9	167.38	227.5	-538.5	466.6	447.5	19.14	24.384	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1D-7H-A168 - HZ - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,100.0	4,973.2	5,081.2	5,036.9	21.0	14.2	167.40	232.9	-551.9	477.9	458.4	19.53	24.472	
5,200.0	5,070.0	5,180.5	5,135.2	21.5	14.5	167.43	238.3	-565.3	489.2	469.3	19.92	24.557	
5,300.0	5,166.7	5,279.9	5,233.5	22.0	14.9	167.45	243.6	-578.7	500.5	480.2	20.31	24.639	
5,400.0	5,263.5	5,379.3	5,331.8	22.5	15.2	167.48	249.0	-592.1	511.7	491.0	20.70	24.717	
5,500.0	5,360.3	5,478.6	5,430.1	23.0	15.5	167.50	254.4	-605.5	523.0	501.9	21.10	24.793	
5,600.0	5,457.0	5,578.0	5,528.4	23.5	15.8	167.52	259.7	-618.9	534.3	512.8	21.49	24.865	
5,700.0	5,553.8	5,677.3	5,626.7	23.9	16.1	167.54	265.1	-632.3	545.6	523.7	21.88	24.936	
5,800.0	5,650.6	5,776.7	5,725.0	24.4	16.4	167.56	270.5	-645.7	556.8	534.6	22.27	25.003	
5,900.0	5,747.4	5,876.1	5,823.3	24.9	16.7	167.57	275.9	-659.1	568.1	545.4	22.66	25.069	
6,000.0	5,844.1	5,975.4	5,921.6	25.4	17.0	167.59	281.2	-672.5	579.4	556.3	23.05	25.132	
6,100.0	5,940.9	6,074.8	6,019.9	25.9	17.3	167.61	286.6	-685.9	590.6	567.2	23.44	25.193	
6,200.0	6,037.7	6,174.2	6,118.3	26.4	17.6	167.62	292.0	-699.3	601.9	578.1	23.84	25.252	
6,300.0	6,134.4	6,273.5	6,216.6	26.8	17.9	167.64	297.3	-712.7	613.2	589.0	24.23	25.309	
6,400.0	6,231.2	6,372.9	6,314.9	27.3	18.2	167.65	302.7	-726.1	624.5	599.8	24.62	25.364	
6,500.0	6,328.0	6,472.2	6,413.2	27.8	18.5	167.67	308.1	-739.5	635.7	610.7	25.01	25.418	
6,600.0	6,424.8	6,571.6	6,511.5	28.3	18.8	167.68	313.5	-752.9	647.0	621.6	25.40	25.470	
6,700.0	6,521.5	6,671.0	6,609.8	28.8	19.2	167.70	318.8	-766.3	658.3	632.5	25.79	25.520	
6,800.0	6,618.3	6,770.3	6,708.1	29.3	19.5	167.71	324.2	-779.7	669.6	643.4	26.19	25.569	
6,900.0	6,715.1	6,869.7	6,806.4	29.8	19.8	167.72	329.6	-793.1	680.8	654.2	26.58	25.616	
6,984.3	6,796.7	6,953.5	6,889.3	30.2	20.0	167.73	334.1	-804.4	690.3	663.4	26.91	25.655	
7,000.0	6,811.9	6,969.1	6,904.7	30.2	20.1	172.64	334.9	-806.5	692.1	665.2	26.93	25.703	
7,050.0	6,860.3	7,018.7	6,953.8	30.5	20.2	-171.48	337.6	-813.2	697.7	670.7	27.02	25.820	
7,100.0	6,908.6	7,067.9	7,002.6	30.7	20.4	-157.00	340.3	-819.9	703.3	676.2	27.18	25.878	
7,150.0	6,956.6	7,117.1	7,051.2	30.9	20.5	-145.29	342.3	-826.5	709.0	681.6	27.36	25.910	
7,200.0	7,004.0	7,167.0	7,100.6	31.1	20.6	-136.34	341.3	-833.2	714.7	687.2	27.50	25.988	
7,250.0	7,050.6	7,217.5	7,150.5	31.2	20.8	-129.67	336.6	-840.0	720.5	692.9	27.59	26.113	
7,300.0	7,096.1	7,268.8	7,200.6	31.4	20.9	-124.68	328.3	-846.9	726.2	698.6	27.63	26.284	
7,350.0	7,140.4	7,320.8	7,250.7	31.6	20.9	-120.91	316.2	-853.7	731.9	704.3	27.62	26.496	
7,400.0	7,183.1	7,373.6	7,300.5	31.7	21.0	-118.03	300.1	-860.5	737.5	709.9	27.57	26.745	
7,450.0	7,224.2	7,427.2	7,349.8	31.8	21.1	-115.80	280.1	-867.2	743.0	715.5	27.50	27.023	
7,500.0	7,263.4	7,481.5	7,398.1	32.0	21.1	-114.05	256.1	-873.8	748.4	721.0	27.39	27.319	
7,550.0	7,300.5	7,536.7	7,445.1	32.1	21.1	-112.67	228.0	-880.2	753.5	726.2	27.28	27.619	
7,600.0	7,335.4	7,592.7	7,490.5	32.2	21.2	-111.57	195.9	-886.4	758.5	731.3	27.18	27.907	
7,650.0	7,367.8	7,649.5	7,533.8	32.4	21.2	-110.69	159.7	-892.3	763.1	736.0	27.10	28.163	
7,700.0	7,397.6	7,707.0	7,574.7	32.5	21.3	-109.99	119.6	-897.9	767.5	740.4	27.06	28.363	
7,750.0	7,424.7	7,765.3	7,612.8	32.6	21.4	-109.43	75.8	-903.0	771.5	744.4	27.09	28.482	
7,800.0	7,448.9	7,824.4	7,647.6	32.8	21.5	-108.98	28.3	-907.8	775.2	748.0	27.20	28.503	
7,850.0	7,470.1	7,884.0	7,678.7	32.9	21.6	-108.63	-22.4	-912.0	778.4	751.0	27.42	28.392	
7,900.0	7,488.2	7,944.3	7,705.8	33.1	21.8	-108.36	-76.1	-915.7	781.2	753.5	27.75	28.155	
7,950.0	7,503.2	8,005.0	7,728.5	33.2	22.0	-108.15	-132.3	-918.8	783.6	755.3	28.21	27.773	
8,000.0	7,514.9	8,066.2	7,746.4	33.4	22.2	-108.00	-190.8	-921.3	785.4	756.6	28.82	27.254	
8,050.0	7,523.3	8,127.8	7,759.5	33.6	22.5	-107.89	-250.8	-923.0	786.7	757.2	29.56	26.617	
8,100.0	7,528.3	8,189.5	7,767.4	33.8	22.8	-107.83	-312.0	-924.1	787.5	757.1	30.43	25.883	
8,149.7	7,530.0	8,251.0	7,770.0	34.0	23.2	-107.81	-373.5	-924.5	787.8	756.4	31.41	25.083	
8,200.0	7,530.0	8,301.4	7,770.0	34.2	23.5	-107.81	-423.8	-924.5	787.8	755.5	32.30	24.388	
8,300.0	7,530.0	8,401.4	7,770.0	34.7	24.3	-107.81	-523.8	-924.5	787.8	753.5	34.26	22.995	
8,400.0	7,530.0	8,501.4	7,770.0	35.3	25.1	-107.81	-623.8	-924.5	787.8	751.4	36.42	21.633	
8,500.0	7,530.0	8,601.4	7,770.0	35.9	26.0	-107.81	-723.8	-924.5	787.8	749.1	38.74	20.334	
8,600.0	7,530.0	8,701.4	7,770.0	36.6	27.0	-107.81	-823.8	-924.5	787.8	746.6	41.21	19.117	
8,700.0	7,530.0	8,801.4	7,770.0	37.4	28.1	-107.81	-923.8	-924.5	787.8	744.0	43.79	17.989	
8,800.0	7,530.0	8,901.4	7,770.0	38.3	29.3	-107.81	-1,023.8	-924.5	787.8	741.3	46.47	16.952	
8,900.0	7,530.0	9,001.4	7,770.0	39.2	30.5	-107.81	-1,123.8	-924.5	787.8	738.6	49.23	16.001	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1D-7H-A168 - HZ - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
9,000.0	7,530.0	9,101.4	7,770.0	40.1	31.7	-107.81	-1,223.8	-924.5	787.8	735.7	52.06	15.132	
9,100.0	7,530.0	9,201.4	7,770.0	41.2	33.0	-107.81	-1,323.8	-924.5	787.8	732.8	54.95	14.337	
9,200.0	7,530.0	9,301.4	7,770.0	42.2	34.4	-107.81	-1,423.8	-924.5	787.8	729.9	57.88	13.610	
9,300.0	7,530.0	9,401.4	7,770.0	43.3	35.8	-107.81	-1,523.8	-924.5	787.8	726.9	60.86	12.944	
9,400.0	7,530.0	9,501.4	7,770.0	44.5	37.2	-107.81	-1,623.8	-924.5	787.8	723.9	63.88	12.333	
9,500.0	7,530.0	9,601.4	7,770.0	45.7	38.6	-107.81	-1,723.8	-924.5	787.8	720.9	66.92	11.772	
9,600.0	7,530.0	9,701.4	7,770.0	46.9	40.1	-107.81	-1,823.8	-924.5	787.8	717.8	69.99	11.256	
9,700.0	7,530.0	9,801.4	7,770.0	48.2	41.6	-107.81	-1,923.8	-924.5	787.8	714.7	73.09	10.779	
9,800.0	7,530.0	9,901.4	7,770.0	49.5	43.1	-107.81	-2,023.8	-924.5	787.8	711.6	76.20	10.338	
9,900.0	7,530.0	10,001.4	7,770.0	50.8	44.6	-107.81	-2,123.8	-924.5	787.8	708.5	79.34	9.930	
10,000.0	7,530.0	10,101.4	7,770.0	52.2	46.1	-107.81	-2,223.8	-924.5	787.8	705.3	82.49	9.550	
10,100.0	7,530.0	10,201.4	7,770.0	53.5	47.7	-107.81	-2,323.8	-924.5	787.8	702.1	85.66	9.197	
10,200.0	7,530.0	10,301.4	7,770.0	54.9	49.3	-107.81	-2,423.8	-924.5	787.8	699.0	88.83	8.868	
10,300.0	7,530.0	10,401.4	7,770.0	56.3	50.8	-107.81	-2,523.8	-924.5	787.8	695.8	92.02	8.561	
10,400.0	7,530.0	10,501.4	7,770.0	57.8	52.4	-107.81	-2,623.8	-924.5	787.8	692.6	95.22	8.273	
10,500.0	7,530.0	10,601.4	7,770.0	59.2	54.0	-107.81	-2,723.8	-924.5	787.8	689.4	98.43	8.003	
10,600.0	7,530.0	10,701.4	7,770.0	60.7	55.6	-107.81	-2,823.8	-924.5	787.8	686.1	101.65	7.750	
10,700.0	7,530.0	10,801.4	7,770.0	62.2	57.3	-107.81	-2,923.8	-924.5	787.8	682.9	104.88	7.511	
10,800.0	7,530.0	10,901.4	7,770.0	63.7	58.9	-107.81	-3,023.8	-924.5	787.8	679.7	108.11	7.287	
10,900.0	7,530.0	11,001.4	7,770.0	65.2	60.5	-107.81	-3,123.8	-924.5	787.8	676.4	111.35	7.075	
11,000.0	7,530.0	11,101.4	7,770.0	66.7	62.2	-107.81	-3,223.8	-924.5	787.8	673.2	114.60	6.874	
11,100.0	7,530.0	11,201.4	7,770.0	68.3	63.8	-107.81	-3,323.8	-924.5	787.8	669.9	117.85	6.685	
11,200.0	7,530.0	11,301.4	7,770.0	69.8	65.5	-107.81	-3,423.8	-924.5	787.8	666.7	121.10	6.505	
11,300.0	7,530.0	11,401.4	7,770.0	71.4	67.1	-107.81	-3,523.8	-924.5	787.8	663.4	124.36	6.335	
11,400.0	7,530.0	11,501.4	7,770.0	72.9	68.8	-107.81	-3,623.8	-924.5	787.8	660.2	127.63	6.173	
11,500.0	7,530.0	11,601.4	7,770.0	74.5	70.5	-107.81	-3,723.8	-924.5	787.8	656.9	130.90	6.018	
11,600.0	7,530.0	11,701.4	7,770.0	76.1	72.1	-107.81	-3,823.8	-924.5	787.8	653.6	134.17	5.872	
11,700.0	7,530.0	11,801.4	7,770.0	77.7	73.8	-107.81	-3,923.8	-924.5	787.8	650.4	137.45	5.732	
11,800.0	7,530.0	11,901.4	7,770.0	79.3	75.5	-107.81	-4,023.8	-924.5	787.8	647.1	140.72	5.598	
11,900.0	7,530.0	12,001.4	7,770.0	80.9	77.2	-107.81	-4,123.8	-924.5	787.8	643.8	144.01	5.471	
12,000.0	7,530.0	12,101.4	7,770.0	82.5	78.9	-107.81	-4,223.8	-924.5	787.8	640.5	147.29	5.349	
12,100.0	7,530.0	12,201.4	7,770.0	84.1	80.5	-107.81	-4,323.8	-924.5	787.8	637.2	150.58	5.232	
12,200.0	7,530.0	12,301.4	7,770.0	85.7	82.2	-107.81	-4,423.8	-924.5	787.8	633.9	153.87	5.120	
12,300.0	7,530.0	12,401.4	7,770.0	87.3	83.9	-107.81	-4,523.8	-924.5	787.8	630.6	157.16	5.013	
12,400.0	7,530.0	12,501.4	7,770.0	89.0	85.6	-107.81	-4,623.8	-924.5	787.8	627.3	160.45	4.910	
12,500.0	7,530.0	12,601.4	7,770.0	90.6	87.3	-107.81	-4,723.8	-924.5	787.8	624.1	163.75	4.811	
12,600.0	7,530.0	12,701.4	7,770.0	92.2	89.0	-107.81	-4,823.8	-924.5	787.8	620.8	167.04	4.716	
12,700.0	7,530.0	12,801.4	7,770.0	93.9	90.7	-107.81	-4,923.8	-924.5	787.8	617.5	170.34	4.625	
12,800.0	7,530.0	12,901.4	7,770.0	95.5	92.4	-107.81	-5,023.8	-924.5	787.8	614.2	173.64	4.537	
12,900.0	7,530.0	13,001.4	7,770.0	97.2	94.1	-107.81	-5,123.8	-924.5	787.8	610.9	176.95	4.452	
13,000.0	7,530.0	13,101.4	7,770.0	98.8	95.8	-107.81	-5,223.8	-924.5	787.8	607.5	180.25	4.371	
13,100.0	7,530.0	13,201.4	7,770.0	100.5	97.6	-107.81	-5,323.8	-924.5	787.8	604.2	183.56	4.292	
13,200.0	7,530.0	13,301.4	7,770.0	102.1	99.3	-107.81	-5,423.8	-924.5	787.8	600.9	186.86	4.216	
13,300.0	7,530.0	13,401.4	7,770.0	103.8	101.0	-107.81	-5,523.8	-924.5	787.8	597.6	190.17	4.143	
13,400.0	7,530.0	13,501.4	7,770.0	105.5	102.7	-107.81	-5,623.8	-924.5	787.8	594.3	193.48	4.072	
13,500.0	7,530.0	13,601.4	7,770.0	107.1	104.4	-107.81	-5,723.8	-924.5	787.8	591.0	196.79	4.003	
13,600.0	7,530.0	13,701.4	7,770.0	108.8	106.1	-107.81	-5,823.8	-924.5	787.8	587.7	200.10	3.937	
13,700.0	7,530.0	13,801.4	7,770.0	110.5	107.8	-107.81	-5,923.8	-924.5	787.8	584.4	203.41	3.873	
13,800.0	7,530.0	13,901.4	7,770.0	112.2	109.6	-107.81	-6,023.8	-924.5	787.8	581.1	206.72	3.811	
13,900.0	7,530.0	14,001.4	7,770.0	113.9	111.3	-107.81	-6,123.8	-924.5	787.8	577.8	210.04	3.751	
14,000.0	7,530.0	14,101.4	7,770.0	115.5	113.0	-107.81	-6,223.8	-924.5	787.8	574.4	213.35	3.692	
14,100.0	7,530.0	14,201.4	7,770.0	117.2	114.7	-107.81	-6,323.8	-924.5	787.8	571.1	216.67	3.636	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1D-7H-A168 - HZ - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
14,200.0	7,530.0	14,301.4	7,770.0	118.9	116.5	-107.81	-6,423.8	-924.5	787.8	567.8	219.99	3.581	
14,300.0	7,530.0	14,401.4	7,770.0	120.6	118.2	-107.81	-6,523.8	-924.5	787.8	564.5	223.30	3.528	
14,400.0	7,530.0	14,501.4	7,770.0	122.3	119.9	-107.81	-6,623.8	-924.5	787.8	561.2	226.62	3.476	
14,500.0	7,530.0	14,601.4	7,770.0	124.0	121.6	-107.81	-6,723.8	-924.5	787.8	557.9	229.94	3.426	
14,600.0	7,530.0	14,701.4	7,770.0	125.7	123.4	-107.81	-6,823.8	-924.5	787.8	554.5	233.26	3.377	
14,700.0	7,530.0	14,801.4	7,770.0	127.4	125.1	-107.81	-6,923.8	-924.5	787.8	551.2	236.58	3.330	
14,800.0	7,530.0	14,901.4	7,770.0	129.1	126.8	-107.81	-7,023.8	-924.5	787.8	547.9	239.90	3.284	
14,900.0	7,530.0	15,001.4	7,770.0	130.8	128.5	-107.81	-7,123.8	-924.5	787.8	544.6	243.22	3.239	
15,000.0	7,530.0	15,101.4	7,770.0	132.5	130.3	-107.81	-7,223.8	-924.5	787.8	541.3	246.54	3.195	
15,100.0	7,530.0	15,201.4	7,770.0	134.2	132.0	-107.81	-7,323.8	-924.5	787.8	537.9	249.86	3.153	
15,200.0	7,530.0	15,301.4	7,770.0	135.9	133.7	-107.81	-7,423.8	-924.5	787.8	534.6	253.19	3.112	
15,300.0	7,530.0	15,401.4	7,770.0	137.6	135.5	-107.81	-7,523.8	-924.5	787.8	531.3	256.51	3.071	
15,400.0	7,530.0	15,501.4	7,770.0	139.3	137.2	-107.81	-7,623.8	-924.5	787.8	528.0	259.83	3.032	
15,500.0	7,530.0	15,601.4	7,770.0	141.0	138.9	-107.81	-7,723.8	-924.5	787.8	524.6	263.16	2.994	
15,600.0	7,530.0	15,701.4	7,770.0	142.7	140.7	-107.81	-7,823.8	-924.5	787.8	521.3	266.48	2.956	
15,700.0	7,530.0	15,801.4	7,770.0	144.4	142.4	-107.81	-7,923.8	-924.5	787.8	518.0	269.81	2.920	
15,800.0	7,530.0	15,901.4	7,770.0	146.1	144.1	-107.81	-8,023.8	-924.5	787.8	514.7	273.13	2.884	
15,900.0	7,530.0	16,001.4	7,770.0	147.8	145.9	-107.81	-8,123.8	-924.5	787.8	511.3	276.46	2.850	
16,000.0	7,530.0	16,101.4	7,770.0	149.5	147.6	-107.81	-8,223.8	-924.5	787.8	508.0	279.79	2.816	
16,100.0	7,530.0	16,201.4	7,770.0	151.2	149.3	-107.81	-8,323.8	-924.5	787.8	504.7	283.11	2.783	
16,200.0	7,530.0	16,301.4	7,770.0	153.0	151.1	-107.81	-8,423.8	-924.5	787.8	501.4	286.44	2.750	
16,300.0	7,530.0	16,401.4	7,770.0	154.7	152.8	-107.81	-8,523.8	-924.5	787.8	498.0	289.77	2.719	
16,400.0	7,530.0	16,501.4	7,770.0	156.4	154.5	-107.81	-8,623.8	-924.5	787.8	494.7	293.09	2.688	
16,500.0	7,530.0	16,601.4	7,770.0	158.1	156.3	-107.81	-8,723.8	-924.5	787.8	491.4	296.42	2.658	
16,600.0	7,530.0	16,701.4	7,770.0	159.8	158.0	-107.81	-8,823.8	-924.5	787.8	488.1	299.75	2.628	
16,700.0	7,530.0	16,801.4	7,770.0	161.5	159.8	-107.81	-8,923.8	-924.5	787.8	484.7	303.08	2.599	
16,800.0	7,530.0	16,901.4	7,770.0	163.3	161.5	-107.81	-9,023.8	-924.5	787.8	481.4	306.41	2.571	
16,900.0	7,530.0	17,001.4	7,770.0	165.0	163.2	-107.81	-9,123.8	-924.5	787.8	478.1	309.74	2.543	
17,000.0	7,530.0	17,101.4	7,770.0	166.7	165.0	-107.81	-9,223.8	-924.5	787.8	474.7	313.07	2.516	
17,100.0	7,530.0	17,201.4	7,770.0	168.4	166.7	-107.81	-9,323.8	-924.5	787.8	471.4	316.40	2.490	
17,200.0	7,530.0	17,301.4	7,770.0	170.1	168.4	-107.81	-9,423.8	-924.5	787.8	468.1	319.73	2.464	
17,300.0	7,530.0	17,401.4	7,770.0	171.9	170.2	-107.81	-9,523.8	-924.5	787.8	464.7	323.06	2.439	
17,400.0	7,530.0	17,501.4	7,770.0	173.6	171.9	-107.81	-9,623.8	-924.5	787.8	461.4	326.39	2.414	
17,500.0	7,530.0	17,601.4	7,770.0	175.3	173.7	-107.81	-9,723.8	-924.5	787.8	458.1	329.72	2.389	
17,589.7	7,530.0	17,691.1	7,770.0	176.9	175.2	-107.81	-9,813.6	-924.5	787.8	455.1	332.71	2.368	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1E-7H-A168 - HZ - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	90.52	-0.4	40.0	40.0				
100.0	100.0	99.0	99.0	0.2	0.2	90.52	-0.4	40.0	40.0	39.7	0.30	132.447	
200.0	200.0	199.0	199.0	0.3	0.3	90.52	-0.4	40.0	40.0	39.4	0.65	61.476	CC, ES
300.0	300.0	299.0	299.0	0.5	0.5	167.86	-0.4	40.0	40.9	39.9	1.00	40.873	
400.0	400.0	399.0	399.0	0.7	0.7	168.58	-0.4	40.0	43.4	42.1	1.35	32.202	
500.0	499.9	499.6	499.6	0.9	0.8	169.16	0.0	39.3	46.9	45.2	1.70	27.633	
600.0	599.7	600.3	600.3	1.1	1.0	169.14	1.3	36.9	50.6	48.6	2.05	24.685	
700.0	699.4	701.1	700.9	1.3	1.2	168.65	3.4	33.1	54.4	52.0	2.40	22.638	
800.0	798.9	801.9	801.5	1.5	1.4	167.77	6.3	27.6	58.3	55.6	2.76	21.141	
900.0	898.3	902.7	902.1	1.8	1.6	166.60	10.1	20.6	62.4	59.3	3.12	19.999	
1,000.0	997.4	1,003.6	1,002.5	2.0	1.8	165.18	14.7	12.1	66.7	63.2	3.49	19.094	
1,100.0	1,096.3	1,104.3	1,102.5	2.3	2.1	163.60	20.2	2.0	71.3	67.4	3.88	18.364	
1,200.0	1,194.9	1,204.1	1,201.6	2.7	2.3	162.40	25.8	-8.4	77.1	72.8	4.27	18.030	
1,300.0	1,293.3	1,303.8	1,300.6	3.0	2.6	161.74	31.4	-18.8	84.6	79.9	4.67	18.094	
1,400.0	1,391.2	1,403.4	1,399.5	3.4	2.8	161.52	37.0	-29.2	93.7	88.6	5.07	18.471	
1,500.0	1,488.9	1,502.8	1,498.2	3.8	3.1	161.64	42.6	-39.6	104.5	99.0	5.47	19.100	
1,600.0	1,586.1	1,602.0	1,596.7	4.3	3.4	161.99	48.2	-50.0	116.9	111.0	5.86	19.937	
1,659.9	1,644.1	1,661.3	1,655.6	4.5	3.5	162.28	51.6	-56.2	125.1	119.0	6.10	20.526	
1,700.0	1,683.0	1,701.0	1,695.0	4.7	3.6	162.49	53.8	-60.3	130.9	124.6	6.26	20.918	
1,800.0	1,779.7	1,800.0	1,793.3	5.2	3.9	162.96	59.4	-70.7	145.1	138.5	6.65	21.816	
1,900.0	1,876.5	1,899.0	1,891.6	5.6	4.1	163.34	65.0	-81.0	159.4	152.3	7.05	22.612	
2,000.0	1,973.3	1,997.9	1,989.9	6.1	4.4	163.66	70.6	-91.4	173.7	166.2	7.45	23.324	
2,100.0	2,070.0	2,096.9	2,088.1	6.6	4.7	163.93	76.2	-101.7	187.9	180.1	7.84	23.963	
2,200.0	2,166.8	2,195.9	2,186.4	7.1	4.9	164.17	81.7	-112.1	202.2	194.0	8.24	24.541	
2,300.0	2,263.6	2,294.9	2,284.7	7.5	5.2	164.37	87.3	-122.4	216.5	207.9	8.64	25.065	
2,400.0	2,360.4	2,393.8	2,382.9	8.0	5.5	164.55	92.9	-132.7	230.8	221.8	9.04	25.544	
2,500.0	2,457.1	2,492.8	2,481.2	8.5	5.7	164.70	98.5	-143.1	245.1	235.6	9.43	25.981	
2,600.0	2,553.9	2,591.8	2,579.5	9.0	6.0	164.84	104.1	-153.4	259.4	249.5	9.83	26.383	
2,700.0	2,650.7	2,690.8	2,677.8	9.4	6.3	164.97	109.7	-163.8	273.7	263.4	10.23	26.754	
2,800.0	2,747.4	2,789.7	2,776.0	9.9	6.5	165.08	115.2	-174.1	288.0	277.3	10.63	27.097	
2,900.0	2,844.2	2,888.7	2,874.3	10.4	6.8	165.18	120.8	-184.5	302.2	291.2	11.02	27.415	
3,000.0	2,941.0	2,987.7	2,972.6	10.9	7.1	165.27	126.4	-194.8	316.5	305.1	11.42	27.711	
3,100.0	3,037.8	3,086.6	3,070.8	11.4	7.3	165.36	132.0	-205.1	330.8	319.0	11.82	27.987	
3,200.0	3,134.5	3,185.6	3,169.1	11.9	7.6	165.43	137.6	-215.5	345.1	332.9	12.22	28.244	
3,300.0	3,231.3	3,284.6	3,267.4	12.3	7.9	165.51	143.2	-225.8	359.4	346.8	12.62	28.486	
3,400.0	3,328.1	3,383.6	3,365.7	12.8	8.1	165.57	148.7	-236.2	373.7	360.7	13.02	28.712	
3,500.0	3,424.8	3,482.5	3,463.9	13.3	8.4	165.63	154.3	-246.5	388.0	374.6	13.41	28.926	
3,600.0	3,521.6	3,581.5	3,562.2	13.8	8.7	165.69	159.9	-256.9	402.3	388.5	13.81	29.126	
3,700.0	3,618.4	3,680.5	3,660.5	14.3	8.9	165.74	165.5	-267.2	416.6	402.4	14.21	29.316	
3,800.0	3,715.2	3,779.4	3,758.7	14.7	9.2	165.79	171.1	-277.5	430.9	416.3	14.61	29.495	
3,900.0	3,811.9	3,878.4	3,857.0	15.2	9.5	165.84	176.7	-287.9	445.2	430.2	15.01	29.664	
4,000.0	3,908.7	3,977.4	3,955.3	15.7	9.7	165.88	182.2	-298.2	459.5	444.1	15.41	29.825	
4,100.0	4,005.5	4,076.4	4,053.6	16.2	10.0	165.92	187.8	-308.6	473.8	458.0	15.81	29.978	
4,200.0	4,102.2	4,175.3	4,151.8	16.7	10.3	165.96	193.4	-318.9	488.1	471.9	16.20	30.123	
4,300.0	4,199.0	4,274.3	4,250.1	17.2	10.5	166.00	199.0	-329.3	502.4	485.8	16.60	30.261	
4,400.0	4,295.8	4,373.3	4,348.4	17.6	10.8	166.03	204.6	-339.6	516.7	499.7	17.00	30.392	
4,500.0	4,392.6	4,472.2	4,446.6	18.1	11.1	166.06	210.2	-349.9	531.0	513.6	17.40	30.518	
4,600.0	4,489.3	4,571.2	4,544.9	18.6	11.3	166.09	215.8	-360.3	545.3	527.5	17.80	30.638	
4,700.0	4,586.1	4,670.2	4,643.2	19.1	11.6	166.12	221.3	-370.6	559.6	541.4	18.20	30.752	
4,800.0	4,682.9	4,769.2	4,741.5	19.6	11.9	166.15	226.9	-381.0	573.9	555.3	18.60	30.862	
4,900.0	4,779.6	4,868.1	4,839.7	20.1	12.1	166.18	232.5	-391.3	588.2	569.2	18.99	30.967	
5,000.0	4,876.4	4,967.1	4,938.0	20.6	12.4	166.20	238.1	-401.7	602.5	583.1	19.39	31.067	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1E-7H-A168 - HZ - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,100.0	4,973.2	5,066.1	5,036.3	21.0	12.7	166.23	243.7	-412.0	616.8	597.0	19.79	31.164	
5,200.0	5,070.0	5,165.0	5,134.5	21.5	13.0	166.25	249.3	-422.3	631.1	610.9	20.19	31.257	
5,300.0	5,166.7	5,264.0	5,232.8	22.0	13.2	166.27	254.8	-432.7	645.4	624.8	20.59	31.346	
5,400.0	5,263.5	5,363.0	5,331.1	22.5	13.5	166.29	260.4	-443.0	659.7	638.7	20.99	31.432	
5,500.0	5,360.3	5,462.0	5,429.4	23.0	13.8	166.31	266.0	-453.4	674.0	652.6	21.39	31.514	
5,600.0	5,457.0	5,560.9	5,527.6	23.5	14.0	166.33	271.6	-463.7	688.3	666.5	21.79	31.594	
5,700.0	5,553.8	5,659.9	5,625.9	23.9	14.3	166.35	277.2	-474.1	702.6	680.4	22.19	31.671	
5,800.0	5,650.6	5,758.9	5,724.2	24.4	14.6	166.37	282.8	-484.4	716.9	694.3	22.58	31.745	
5,900.0	5,747.4	5,857.9	5,822.4	24.9	14.8	166.38	288.3	-494.7	731.2	708.2	22.98	31.816	
6,000.0	5,844.1	5,956.8	5,920.7	25.4	15.1	166.40	293.9	-505.1	745.5	722.1	23.38	31.885	
6,100.0	5,940.9	6,055.8	6,019.0	25.9	15.4	166.41	299.5	-515.4	759.8	736.0	23.78	31.952	
6,200.0	6,037.7	6,154.8	6,117.3	26.4	15.6	166.43	305.1	-525.8	774.1	749.9	24.18	32.016	
6,300.0	6,134.4	6,253.7	6,215.5	26.8	15.9	166.44	310.7	-536.1	788.4	763.8	24.58	32.078	
6,400.0	6,231.2	6,352.7	6,313.8	27.3	16.2	166.46	316.3	-546.5	802.7	777.7	24.98	32.139	
6,500.0	6,328.0	6,451.7	6,412.1	27.8	16.4	166.47	321.8	-556.8	817.0	791.6	25.38	32.197	
6,600.0	6,424.8	6,550.7	6,510.3	28.3	16.7	166.48	327.4	-567.1	831.3	805.6	25.77	32.254	
6,700.0	6,521.5	6,649.6	6,608.6	28.8	17.0	166.50	333.0	-577.5	845.6	819.5	26.17	32.309	
6,800.0	6,618.3	6,748.6	6,706.9	29.3	17.2	166.51	338.6	-587.8	859.9	833.4	26.57	32.362	
6,900.0	6,715.1	6,847.8	6,805.5	29.8	17.5	166.56	343.6	-598.2	874.2	847.3	26.95	32.437	
6,984.3	6,796.7	6,931.3	6,888.3	30.2	17.7	167.10	340.2	-606.9	886.3	859.2	27.04	32.775	
7,000.0	6,811.9	6,946.6	6,903.4	30.2	17.7	172.21	338.6	-608.5	888.5	861.5	26.98	32.932	
7,050.0	6,860.3	6,994.9	6,951.0	30.5	17.8	-171.08	331.1	-613.5	895.7	869.0	26.76	33.476	
7,100.0	6,908.6	7,042.9	6,997.4	30.7	17.8	-155.49	320.6	-618.4	903.0	876.5	26.53	34.035	
7,150.0	6,956.6	7,090.3	7,042.7	30.9	17.8	-142.49	307.1	-623.2	910.3	884.0	26.32	34.588	
7,200.0	7,004.0	7,137.4	7,086.6	31.1	17.8	-132.27	290.8	-627.8	917.5	891.4	26.13	35.111	
7,250.0	7,050.6	7,184.1	7,129.0	31.2	17.9	-124.34	271.7	-632.3	924.6	898.7	25.98	35.584	
7,300.0	7,096.1	7,230.4	7,169.8	31.4	17.9	-118.14	250.2	-636.5	931.7	905.8	25.89	35.990	
7,350.0	7,140.4	7,276.4	7,208.8	31.6	17.9	-113.21	226.2	-640.7	938.5	912.7	25.84	36.314	
7,400.0	7,183.1	7,322.1	7,245.9	31.7	17.9	-109.21	199.9	-644.6	945.2	919.3	25.86	36.548	
7,450.0	7,224.2	7,367.6	7,281.2	31.8	17.9	-105.91	171.4	-648.3	951.6	925.7	25.94	36.688	
7,500.0	7,263.4	7,412.7	7,314.3	32.0	17.9	-103.15	141.0	-651.8	957.8	931.7	26.07	36.735	
7,550.0	7,300.5	7,457.7	7,345.4	32.1	17.9	-100.81	108.6	-655.0	963.6	937.3	26.26	36.695	
7,600.0	7,335.4	7,500.0	7,372.7	32.2	18.0	-98.82	76.5	-657.9	969.1	942.6	26.49	36.586	
7,650.0	7,367.8	7,547.0	7,400.8	32.4	18.1	-97.10	38.9	-660.9	974.2	947.4	26.78	36.379	
7,700.0	7,397.6	7,591.4	7,425.0	32.5	18.1	-95.64	1.8	-663.4	978.9	951.8	27.09	36.134	
7,750.0	7,424.7	7,635.6	7,446.8	32.6	18.2	-94.39	-36.6	-665.7	983.2	955.8	27.46	35.809	
7,800.0	7,448.9	7,679.7	7,466.2	32.8	18.4	-93.32	-76.2	-667.7	987.1	959.2	27.85	35.445	
7,850.0	7,470.1	7,723.8	7,483.1	32.9	18.5	-92.43	-116.8	-669.5	990.5	962.2	28.26	35.044	
7,900.0	7,488.2	7,767.7	7,497.4	33.1	18.7	-91.69	-158.2	-671.0	993.3	964.6	28.70	34.610	
7,950.0	7,503.2	7,811.5	7,509.2	33.2	18.9	-91.09	-200.5	-672.3	995.7	966.6	29.16	34.147	
8,000.0	7,514.9	7,855.3	7,518.3	33.4	19.1	-90.64	-243.2	-673.2	997.6	968.0	29.64	33.659	
8,050.0	7,523.3	7,900.0	7,525.0	33.6	19.4	-90.32	-287.4	-673.9	998.9	968.8	30.15	33.138	
8,100.0	7,528.3	7,942.7	7,528.7	33.8	19.7	-90.12	-330.0	-674.3	999.8	969.1	30.66	32.608	
8,149.7	7,530.0	7,986.3	7,530.0	34.0	20.0	-90.06	-373.6	-674.5	1,000.0	968.8	31.20	32.055	
8,200.0	7,530.0	8,036.6	7,530.0	34.2	20.4	-90.06	-423.8	-674.5	1,000.0	967.9	32.18	31.073	
8,300.0	7,530.0	8,136.6	7,530.0	34.7	21.2	-90.06	-523.8	-674.5	1,000.0	965.7	34.30	29.155	
8,400.0	7,530.0	8,236.6	7,530.0	35.3	22.2	-90.06	-623.8	-674.5	1,000.0	963.4	36.63	27.299	
8,500.0	7,530.0	8,336.6	7,530.0	35.9	23.2	-90.06	-723.8	-674.5	1,000.0	960.9	39.14	25.550	
8,600.0	7,530.0	8,436.6	7,530.0	36.6	24.3	-90.06	-823.8	-674.5	1,000.0	958.2	41.79	23.928	
8,700.0	7,530.0	8,536.6	7,530.0	37.4	25.5	-90.06	-923.8	-674.5	1,000.0	955.5	44.56	22.441	
8,800.0	7,530.0	8,636.6	7,530.0	38.3	26.8	-90.06	-1,023.8	-674.5	1,000.0	952.6	47.43	21.083	
8,900.0	7,530.0	8,736.6	7,530.0	39.2	28.1	-90.06	-1,123.8	-674.5	1,000.0	949.7	50.38	19.849	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1E-7H-A168 - HZ - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
9,000.0	7,530.0	8,836.6	7,530.0	40.1	29.5	-90.06	-1,223.8	-674.5	1,000.0	946.6	53.40	18.728	
9,100.0	7,530.0	8,936.6	7,530.0	41.2	30.9	-90.06	-1,323.8	-674.5	1,000.0	943.6	56.47	17.708	
9,200.0	7,530.0	9,036.6	7,530.0	42.2	32.3	-90.06	-1,423.8	-674.5	1,000.0	940.4	59.60	16.780	
9,300.0	7,530.0	9,136.6	7,530.0	43.3	33.8	-90.06	-1,523.8	-674.5	1,000.0	937.3	62.76	15.935	
9,400.0	7,530.0	9,236.6	7,530.0	44.5	35.2	-90.06	-1,623.8	-674.5	1,000.0	934.1	65.96	15.162	
9,500.0	7,530.0	9,336.6	7,530.0	45.7	36.8	-90.06	-1,723.8	-674.5	1,000.0	930.9	69.18	14.455	
9,600.0	7,530.0	9,436.6	7,530.0	46.9	38.3	-90.06	-1,823.8	-674.5	1,000.0	927.6	72.44	13.805	
9,700.0	7,530.0	9,536.6	7,530.0	48.2	39.8	-90.06	-1,923.8	-674.5	1,000.0	924.3	75.71	13.208	
9,800.0	7,530.0	9,636.6	7,530.0	49.5	41.4	-90.06	-2,023.8	-674.5	1,000.0	921.0	79.01	12.657	
9,900.0	7,530.0	9,736.6	7,530.0	50.8	43.0	-90.06	-2,123.8	-674.5	1,000.0	917.7	82.33	12.147	
10,000.0	7,530.0	9,836.6	7,530.0	52.2	44.6	-90.06	-2,223.8	-674.5	1,000.0	914.4	85.66	11.675	
10,100.0	7,530.0	9,936.6	7,530.0	53.5	46.2	-90.06	-2,323.8	-674.5	1,000.0	911.0	89.00	11.237	
10,200.0	7,530.0	10,036.6	7,530.0	54.9	47.8	-90.06	-2,423.8	-674.5	1,000.0	907.7	92.35	10.828	
10,300.0	7,530.0	10,136.6	7,530.0	56.3	49.4	-90.06	-2,523.8	-674.5	1,000.0	904.3	95.72	10.447	
10,400.0	7,530.0	10,236.6	7,530.0	57.8	51.1	-90.06	-2,623.8	-674.5	1,000.0	900.9	99.10	10.092	
10,500.0	7,530.0	10,336.6	7,530.0	59.2	52.7	-90.06	-2,723.8	-674.5	1,000.0	897.6	102.48	9.758	
10,600.0	7,530.0	10,436.6	7,530.0	60.7	54.4	-90.06	-2,823.8	-674.5	1,000.0	894.2	105.88	9.445	
10,700.0	7,530.0	10,536.6	7,530.0	62.2	56.0	-90.06	-2,923.8	-674.5	1,000.0	890.8	109.28	9.152	
10,800.0	7,530.0	10,636.6	7,530.0	63.7	57.7	-90.06	-3,023.8	-674.5	1,000.0	887.4	112.68	8.875	
10,900.0	7,530.0	10,736.6	7,530.0	65.2	59.4	-90.06	-3,123.8	-674.5	1,000.0	883.9	116.10	8.614	
11,000.0	7,530.0	10,836.6	7,530.0	66.7	61.0	-90.06	-3,223.8	-674.5	1,000.0	880.5	119.51	8.368	
11,100.0	7,530.0	10,936.6	7,530.0	68.3	62.7	-90.06	-3,323.8	-674.5	1,000.0	877.1	122.94	8.135	
11,200.0	7,530.0	11,036.6	7,530.0	69.8	64.4	-90.06	-3,423.8	-674.5	1,000.0	873.7	126.37	7.914	
11,300.0	7,530.0	11,136.6	7,530.0	71.4	66.1	-90.06	-3,523.8	-674.5	1,000.0	870.2	129.80	7.705	
11,400.0	7,530.0	11,236.6	7,530.0	72.9	67.8	-90.06	-3,623.8	-674.5	1,000.0	866.8	133.23	7.506	
11,500.0	7,530.0	11,336.6	7,530.0	74.5	69.4	-90.06	-3,723.8	-674.5	1,000.0	863.4	136.67	7.317	
11,600.0	7,530.0	11,436.6	7,530.0	76.1	71.1	-90.06	-3,823.8	-674.5	1,000.0	859.9	140.12	7.137	
11,700.0	7,530.0	11,536.6	7,530.0	77.7	72.8	-90.06	-3,923.8	-674.5	1,000.0	856.5	143.56	6.966	
11,800.0	7,530.0	11,636.6	7,530.0	79.3	74.5	-90.06	-4,023.8	-674.5	1,000.0	853.0	147.01	6.802	
11,900.0	7,530.0	11,736.6	7,530.0	80.9	76.2	-90.06	-4,123.8	-674.5	1,000.0	849.6	150.47	6.646	
12,000.0	7,530.0	11,836.6	7,530.0	82.5	77.9	-90.06	-4,223.8	-674.5	1,000.0	846.1	153.92	6.497	
12,100.0	7,530.0	11,936.6	7,530.0	84.1	79.7	-90.06	-4,323.8	-674.5	1,000.0	842.7	157.38	6.354	
12,200.0	7,530.0	12,036.6	7,530.0	85.7	81.4	-90.06	-4,423.8	-674.5	1,000.0	839.2	160.84	6.218	
12,300.0	7,530.0	12,136.6	7,530.0	87.3	83.1	-90.06	-4,523.8	-674.5	1,000.0	835.7	164.30	6.087	
12,400.0	7,530.0	12,236.6	7,530.0	89.0	84.8	-90.06	-4,623.8	-674.5	1,000.0	832.3	167.76	5.961	
12,500.0	7,530.0	12,336.6	7,530.0	90.6	86.5	-90.06	-4,723.8	-674.5	1,000.0	828.8	171.23	5.840	
12,600.0	7,530.0	12,436.6	7,530.0	92.2	88.2	-90.06	-4,823.8	-674.5	1,000.0	825.3	174.69	5.725	
12,700.0	7,530.0	12,536.6	7,530.0	93.9	89.9	-90.06	-4,923.8	-674.5	1,000.0	821.9	178.16	5.613	
12,800.0	7,530.0	12,636.6	7,530.0	95.5	91.7	-90.06	-5,023.8	-674.5	1,000.0	818.4	181.63	5.506	
12,900.0	7,530.0	12,736.6	7,530.0	97.2	93.4	-90.06	-5,123.8	-674.5	1,000.0	814.9	185.10	5.403	
13,000.0	7,530.0	12,836.6	7,530.0	98.8	95.1	-90.06	-5,223.8	-674.5	1,000.0	811.5	188.58	5.303	
13,100.0	7,530.0	12,936.6	7,530.0	100.5	96.8	-90.06	-5,323.8	-674.5	1,000.0	808.0	192.05	5.207	
13,200.0	7,530.0	13,036.6	7,530.0	102.1	98.5	-90.06	-5,423.8	-674.5	1,000.0	804.5	195.53	5.115	
13,300.0	7,530.0	13,136.6	7,530.0	103.8	100.3	-90.06	-5,523.8	-674.5	1,000.0	801.0	199.00	5.025	
13,400.0	7,530.0	13,236.6	7,530.0	105.5	102.0	-90.06	-5,623.8	-674.5	1,000.0	797.6	202.48	4.939	
13,500.0	7,530.0	13,336.6	7,530.0	107.1	103.7	-90.06	-5,723.8	-674.5	1,000.0	794.1	205.96	4.856	
13,600.0	7,530.0	13,436.6	7,530.0	108.8	105.4	-90.06	-5,823.8	-674.5	1,000.0	790.6	209.44	4.775	
13,700.0	7,530.0	13,536.6	7,530.0	110.5	107.2	-90.06	-5,923.8	-674.5	1,000.0	787.1	212.92	4.697	
13,800.0	7,530.0	13,636.6	7,530.0	112.2	108.9	-90.06	-6,023.8	-674.5	1,000.0	783.6	216.40	4.621	
13,900.0	7,530.0	13,736.6	7,530.0	113.9	110.6	-90.06	-6,123.8	-674.5	1,000.0	780.2	219.88	4.548	
14,000.0	7,530.0	13,836.6	7,530.0	115.5	112.4	-90.06	-6,223.8	-674.5	1,000.0	776.7	223.37	4.477	
14,100.0	7,530.0	13,936.6	7,530.0	117.2	114.1	-90.06	-6,323.8	-674.5	1,000.0	773.2	226.85	4.408	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1E-7H-A168 - HZ - Plan #2

Survey Program: 0-Geolink MWD

Offset Site Error: 0.0 ft

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
14,200.0	7,530.0	14,036.6	7,530.0	118.9	115.8	-90.06	-6,423.8	-674.5	1,000.0	769.7	230.33	4.342	
14,300.0	7,530.0	14,136.6	7,530.0	120.6	117.6	-90.06	-6,523.8	-674.5	1,000.0	766.2	233.82	4.277	
14,400.0	7,530.0	14,236.6	7,530.0	122.3	119.3	-90.06	-6,623.8	-674.5	1,000.0	762.7	237.30	4.214	
14,500.0	7,530.0	14,336.6	7,530.0	124.0	121.0	-90.06	-6,723.8	-674.5	1,000.0	759.3	240.79	4.153	
14,600.0	7,530.0	14,436.6	7,530.0	125.7	122.8	-90.06	-6,823.8	-674.5	1,000.0	755.8	244.28	4.094	
14,700.0	7,530.0	14,536.6	7,530.0	127.4	124.5	-90.06	-6,923.8	-674.5	1,000.0	752.3	247.77	4.036	
14,800.0	7,530.0	14,636.6	7,530.0	129.1	126.2	-90.06	-7,023.8	-674.5	1,000.0	748.8	251.25	3.980	
14,900.0	7,530.0	14,736.6	7,530.0	130.8	128.0	-90.06	-7,123.8	-674.5	1,000.0	745.3	254.74	3.926	
15,000.0	7,530.0	14,836.6	7,530.0	132.5	129.7	-90.06	-7,223.8	-674.5	1,000.0	741.8	258.23	3.873	
15,100.0	7,530.0	14,936.6	7,530.0	134.2	131.4	-90.06	-7,323.8	-674.4	1,000.0	738.3	261.72	3.821	
15,200.0	7,530.0	15,036.6	7,530.0	135.9	133.2	-90.06	-7,423.8	-674.4	1,000.0	734.8	265.21	3.771	
15,300.0	7,530.0	15,136.6	7,530.0	137.6	134.9	-90.06	-7,523.8	-674.4	1,000.0	731.3	268.70	3.722	
15,400.0	7,530.0	15,236.6	7,530.0	139.3	136.6	-90.06	-7,623.8	-674.4	1,000.0	727.9	272.19	3.674	
15,500.0	7,530.0	15,336.6	7,530.0	141.0	138.4	-90.06	-7,723.8	-674.4	1,000.0	724.4	275.69	3.627	
15,600.0	7,530.0	15,436.6	7,530.0	142.7	140.1	-90.06	-7,823.8	-674.4	1,000.0	720.9	279.18	3.582	
15,700.0	7,530.0	15,536.6	7,530.0	144.4	141.9	-90.06	-7,923.8	-674.4	1,000.0	717.4	282.67	3.538	
15,800.0	7,530.0	15,636.6	7,530.0	146.1	143.6	-90.06	-8,023.8	-674.4	1,000.0	713.9	286.16	3.495	
15,900.0	7,530.0	15,736.6	7,530.0	147.8	145.3	-90.06	-8,123.8	-674.4	1,000.0	710.4	289.66	3.453	
16,000.0	7,530.0	15,836.6	7,530.0	149.5	147.1	-90.06	-8,223.8	-674.4	1,000.0	706.9	293.15	3.411	
16,100.0	7,530.0	15,936.6	7,530.0	151.2	148.8	-90.06	-8,323.8	-674.4	1,000.0	703.4	296.64	3.371	
16,200.0	7,530.0	16,036.6	7,530.0	153.0	150.6	-90.06	-8,423.8	-674.4	1,000.0	699.9	300.14	3.332	
16,300.0	7,530.0	16,136.6	7,530.0	154.7	152.3	-90.06	-8,523.8	-674.4	1,000.0	696.4	303.63	3.294	
16,400.0	7,530.0	16,236.6	7,530.0	156.4	154.1	-90.06	-8,623.8	-674.4	1,000.0	692.9	307.13	3.256	
16,500.0	7,530.0	16,336.6	7,530.0	158.1	155.8	-90.06	-8,723.8	-674.4	1,000.0	689.4	310.62	3.219	
16,600.0	7,530.0	16,436.6	7,530.0	159.8	157.5	-90.06	-8,823.8	-674.4	1,000.0	685.9	314.12	3.184	
16,700.0	7,530.0	16,536.6	7,530.0	161.5	159.3	-90.06	-8,923.8	-674.4	1,000.0	682.4	317.61	3.149	
16,800.0	7,530.0	16,636.6	7,530.0	163.3	161.0	-90.06	-9,023.8	-674.4	1,000.0	678.9	321.11	3.114	
16,900.0	7,530.0	16,736.6	7,530.0	165.0	162.8	-90.06	-9,123.8	-674.4	1,000.0	675.4	324.61	3.081	
17,000.0	7,530.0	16,836.6	7,530.0	166.7	164.5	-90.06	-9,223.8	-674.4	1,000.0	671.9	328.10	3.048	
17,100.0	7,530.0	16,936.6	7,530.0	168.4	166.3	-90.06	-9,323.8	-674.4	1,000.0	668.4	331.60	3.016	
17,200.0	7,530.0	17,036.6	7,530.0	170.1	168.0	-90.06	-9,423.8	-674.4	1,000.0	665.0	335.10	2.984	
17,300.0	7,530.0	17,136.6	7,530.0	171.9	169.7	-90.06	-9,523.8	-674.4	1,000.0	661.5	338.59	2.954	
17,400.0	7,530.0	17,236.6	7,530.0	173.6	171.5	-90.06	-9,623.8	-674.4	1,000.0	658.0	342.09	2.923	
17,500.0	7,530.0	17,336.6	7,530.0	175.3	173.2	-90.06	-9,723.8	-674.4	1,000.0	654.5	345.59	2.894	
17,589.7	7,530.0	17,426.3	7,530.0	176.9	174.8	-90.06	-9,813.6	-674.4	1,000.0	651.3	348.73	2.868	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1F-7H-A168 - HZ - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	90.42	-0.4	50.1	50.1				
100.0	100.0	99.0	99.0	0.2	0.2	90.42	-0.4	50.1	50.1	49.8	0.30	165.788	
200.0	200.0	199.0	199.0	0.3	0.3	90.42	-0.4	50.1	50.1	49.4	0.65	76.951	CC, ES
300.0	300.0	299.0	299.0	0.5	0.5	167.70	-0.4	50.1	50.9	49.9	1.00	50.947	
400.0	400.0	399.0	399.0	0.7	0.7	168.30	-0.4	50.1	53.5	52.2	1.35	39.668	
500.0	499.9	499.3	499.3	0.9	0.8	169.05	-0.2	49.9	57.6	55.9	1.70	33.925	
600.0	599.7	600.0	600.0	1.1	1.0	169.19	0.8	48.5	62.2	60.1	2.05	30.351	
700.0	699.4	700.8	700.8	1.3	1.2	168.73	2.9	45.7	67.0	64.6	2.40	27.911	
800.0	798.9	801.7	801.5	1.5	1.4	167.79	6.1	41.5	72.2	69.4	2.76	26.160	
900.0	898.3	902.6	902.1	1.8	1.6	166.47	10.4	35.8	77.6	74.5	3.12	24.852	
1,000.0	997.4	1,003.1	1,002.2	2.0	1.8	164.93	15.6	28.9	83.5	80.0	3.50	23.879	
1,100.0	1,096.3	1,102.8	1,101.6	2.3	2.0	163.75	21.0	21.7	90.8	86.9	3.88	23.435	
1,200.0	1,194.9	1,202.4	1,200.7	2.7	2.2	163.05	26.4	14.5	99.8	95.6	4.26	23.443	
1,300.0	1,293.3	1,301.8	1,299.8	3.0	2.5	162.72	31.8	7.4	110.5	105.9	4.65	23.796	
1,400.0	1,391.2	1,401.0	1,398.6	3.4	2.7	162.68	37.1	0.2	122.9	117.9	5.03	24.420	
1,500.0	1,488.9	1,500.1	1,497.2	3.8	2.9	162.86	42.5	-6.9	136.9	131.5	5.42	25.265	
1,600.0	1,586.1	1,598.8	1,595.6	4.3	3.1	163.19	47.9	-14.0	152.6	146.8	5.80	26.290	
1,659.9	1,644.1	1,657.8	1,654.3	4.5	3.3	163.44	51.0	-18.2	162.7	156.7	6.03	26.980	
1,700.0	1,683.0	1,697.3	1,693.7	4.7	3.4	163.62	53.2	-21.1	169.7	163.6	6.19	27.432	
1,800.0	1,779.7	1,795.8	1,791.7	5.2	3.6	164.03	58.5	-28.2	187.2	180.7	6.58	28.464	
1,900.0	1,876.5	1,894.2	1,889.8	5.6	3.8	164.36	63.8	-35.3	204.7	197.8	6.97	29.381	
2,000.0	1,973.3	1,992.7	1,987.8	6.1	4.0	164.64	69.2	-42.3	222.2	214.9	7.36	30.201	
2,100.0	2,070.0	2,091.1	2,085.9	6.6	4.3	164.88	74.5	-49.4	239.7	232.0	7.75	30.938	
2,200.0	2,166.8	2,189.6	2,183.9	7.1	4.5	165.09	79.8	-56.5	257.2	249.1	8.14	31.604	
2,300.0	2,263.6	2,288.0	2,282.0	7.5	4.7	165.27	85.2	-63.6	274.8	266.2	8.53	32.209	
2,400.0	2,360.4	2,386.5	2,380.0	8.0	5.0	165.43	90.5	-70.7	292.3	283.3	8.92	32.761	
2,500.0	2,457.1	2,484.9	2,478.1	8.5	5.2	165.57	95.8	-77.8	309.8	300.5	9.31	33.266	
2,600.0	2,553.9	2,583.4	2,576.1	9.0	5.4	165.70	101.2	-84.8	327.3	317.6	9.70	33.731	
2,700.0	2,650.7	2,681.8	2,674.2	9.4	5.6	165.81	106.5	-91.9	344.8	334.7	10.09	34.160	
2,800.0	2,747.4	2,780.3	2,772.2	9.9	5.9	165.91	111.8	-99.0	362.3	351.9	10.49	34.556	
2,900.0	2,844.2	2,878.7	2,870.3	10.4	6.1	166.00	117.1	-106.1	379.9	369.0	10.88	34.924	
3,000.0	2,941.0	2,977.2	2,968.3	10.9	6.3	166.09	122.5	-113.2	397.4	386.1	11.27	35.266	
3,100.0	3,037.8	3,075.6	3,066.4	11.4	6.6	166.17	127.8	-120.3	414.9	403.3	11.66	35.585	
3,200.0	3,134.5	3,174.1	3,164.4	11.9	6.8	166.24	133.1	-127.3	432.4	420.4	12.05	35.884	
3,300.0	3,231.3	3,272.5	3,262.5	12.3	7.0	166.30	138.5	-134.4	450.0	437.5	12.44	36.163	
3,400.0	3,328.1	3,371.0	3,360.5	12.8	7.2	166.36	143.8	-141.5	467.5	454.7	12.83	36.426	
3,500.0	3,424.8	3,469.4	3,458.6	13.3	7.5	166.42	149.1	-148.6	485.0	471.8	13.23	36.673	
3,600.0	3,521.6	3,567.9	3,556.6	13.8	7.7	166.47	154.5	-155.7	502.5	488.9	13.62	36.905	
3,700.0	3,618.4	3,666.3	3,654.7	14.3	7.9	166.52	159.8	-162.8	520.1	506.1	14.01	37.125	
3,800.0	3,715.2	3,764.8	3,752.7	14.7	8.2	166.57	165.1	-169.9	537.6	523.2	14.40	37.333	
3,900.0	3,811.9	3,863.3	3,850.8	15.2	8.4	166.61	170.4	-176.9	555.1	540.3	14.79	37.529	
4,000.0	3,908.7	3,961.7	3,948.8	15.7	8.6	166.65	175.8	-184.0	572.6	557.5	15.18	37.716	
4,100.0	4,005.5	4,060.2	4,046.9	16.2	8.9	166.69	181.1	-191.1	590.2	574.6	15.57	37.893	
4,200.0	4,102.2	4,158.6	4,144.9	16.7	9.1	166.72	186.4	-198.2	607.7	591.7	15.97	38.061	
4,300.0	4,199.0	4,257.1	4,243.0	17.2	9.3	166.76	191.8	-205.3	625.2	608.9	16.36	38.221	
4,400.0	4,295.8	4,355.5	4,341.0	17.6	9.6	166.79	197.1	-212.4	642.8	626.0	16.75	38.374	
4,500.0	4,392.6	4,454.0	4,439.1	18.1	9.8	166.82	202.4	-219.4	660.3	643.1	17.14	38.520	
4,600.0	4,489.3	4,552.4	4,537.1	18.6	10.0	166.85	207.7	-226.5	677.8	660.3	17.53	38.659	
4,700.0	4,586.1	4,650.9	4,635.2	19.1	10.2	166.88	213.1	-233.6	695.3	677.4	17.92	38.792	
4,800.0	4,682.9	4,749.3	4,733.2	19.6	10.5	166.90	218.4	-240.7	712.9	694.6	18.32	38.919	
4,900.0	4,779.6	4,847.8	4,831.3	20.1	10.7	166.93	223.7	-247.8	730.4	711.7	18.71	39.041	
5,000.0	4,876.4	4,946.2	4,929.3	20.6	10.9	166.95	229.1	-254.9	747.9	728.8	19.10	39.158	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1F-7H-A168 - HZ - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,100.0	4,973.2	5,044.7	5,027.4	21.0	11.2	166.97	234.4	-262.0	765.5	746.0	19.49	39.271	
5,200.0	5,070.0	5,143.1	5,125.4	21.5	11.4	166.99	239.7	-269.0	783.0	763.1	19.88	39.379	
5,300.0	5,166.7	5,241.6	5,223.5	22.0	11.6	167.01	245.1	-276.1	800.5	780.2	20.28	39.482	
5,400.0	5,263.5	5,340.0	5,321.6	22.5	11.9	167.03	250.4	-283.2	818.0	797.4	20.67	39.582	
5,500.0	5,360.3	5,438.5	5,419.6	23.0	12.1	167.05	255.7	-290.3	835.6	814.5	21.06	39.678	
5,600.0	5,457.0	5,536.9	5,517.7	23.5	12.3	167.07	261.0	-297.4	853.1	831.7	21.45	39.771	
5,700.0	5,553.8	5,635.4	5,615.7	23.9	12.6	167.09	266.4	-304.5	870.6	848.8	21.84	39.860	
5,800.0	5,650.6	5,733.8	5,713.8	24.4	12.8	167.10	271.7	-311.5	888.2	865.9	22.23	39.946	
5,900.0	5,747.4	5,832.3	5,811.8	24.9	13.0	167.12	277.0	-318.6	905.7	883.1	22.63	40.029	
6,000.0	5,844.1	5,930.7	5,909.9	25.4	13.3	167.14	282.4	-325.7	923.2	900.2	23.02	40.109	
6,100.0	5,940.9	6,029.2	6,007.9	25.9	13.5	167.15	287.7	-332.8	940.8	917.3	23.41	40.187	
6,200.0	6,037.7	6,127.6	6,106.0	26.4	13.7	167.16	293.0	-339.9	958.3	934.5	23.80	40.261	
6,300.0	6,134.4	6,226.1	6,204.0	26.8	13.9	167.18	298.4	-347.0	975.8	951.6	24.19	40.334	
6,400.0	6,231.2	6,324.5	6,302.1	27.3	14.2	167.19	303.7	-354.0	993.3	968.8	24.59	40.404	
6,500.0	6,328.0	6,423.0	6,400.1	27.8	14.4	167.20	309.0	-361.1	1,010.9	985.9	24.98	40.472	
6,600.0	6,424.8	6,521.4	6,498.2	28.3	14.6	167.22	314.3	-368.2	1,028.4	1,003.0	25.37	40.538	
6,700.0	6,521.5	6,619.9	6,596.2	28.8	14.9	167.23	319.7	-375.3	1,045.9	1,020.2	25.76	40.602	
6,800.0	6,618.3	6,718.3	6,694.3	29.3	15.1	167.24	325.0	-382.4	1,063.5	1,037.3	26.15	40.664	
6,900.0	6,715.1	6,816.8	6,792.3	29.8	15.3	167.25	330.3	-389.5	1,081.0	1,054.5	26.54	40.724	
6,984.3	6,796.7	6,899.8	6,875.0	30.2	15.5	167.26	334.8	-395.4	1,095.8	1,068.9	26.88	40.773	
7,000.0	6,811.9	6,915.2	6,890.4	30.2	15.6	172.25	335.7	-396.6	1,098.5	1,071.7	26.88	40.874	
7,050.0	6,860.3	6,964.4	6,939.3	30.5	15.7	-171.53	338.3	-400.1	1,107.3	1,080.4	26.89	41.177	
7,100.0	6,908.6	7,013.2	6,987.9	30.7	15.8	-156.59	341.0	-403.6	1,116.0	1,089.1	26.93	41.437	
7,150.0	6,956.6	7,061.7	7,036.3	30.9	15.9	-144.38	343.3	-407.1	1,124.8	1,097.8	26.99	41.673	
7,200.0	7,004.0	7,110.8	7,085.2	31.1	16.0	-134.95	343.0	-410.6	1,133.5	1,106.5	27.02	41.954	
7,250.0	7,050.6	7,160.6	7,134.7	31.2	16.0	-127.79	339.2	-414.2	1,142.2	1,115.2	27.02	42.279	
7,300.0	7,096.1	7,211.2	7,184.6	31.4	16.1	-122.34	331.8	-417.7	1,150.8	1,123.8	26.99	42.640	
7,350.0	7,140.4	7,262.5	7,234.6	31.6	16.1	-118.12	320.7	-421.3	1,159.3	1,132.4	26.95	43.025	
7,400.0	7,183.1	7,314.8	7,284.6	31.7	16.1	-114.81	305.8	-424.9	1,167.6	1,140.7	26.89	43.422	
7,450.0	7,224.2	7,367.9	7,334.1	31.8	16.1	-112.17	286.9	-428.4	1,175.7	1,148.8	26.83	43.816	
7,500.0	7,263.4	7,421.9	7,382.8	32.0	16.1	-110.03	264.0	-431.8	1,183.5	1,156.7	26.78	44.191	
7,550.0	7,300.5	7,476.9	7,430.6	32.1	16.1	-108.28	236.9	-435.1	1,190.9	1,164.2	26.75	44.528	
7,600.0	7,335.4	7,532.8	7,476.9	32.2	16.0	-106.83	205.7	-438.4	1,198.1	1,171.3	26.74	44.805	
7,650.0	7,367.8	7,589.7	7,521.3	32.4	16.0	-105.64	170.4	-441.4	1,204.8	1,178.0	26.77	45.002	
7,700.0	7,397.6	7,647.5	7,563.5	32.5	16.0	-104.65	131.0	-444.3	1,211.0	1,184.2	26.85	45.096	
7,750.0	7,424.7	7,706.3	7,602.9	32.6	16.1	-103.82	87.5	-447.0	1,216.8	1,189.8	27.00	45.058	
7,800.0	7,448.9	7,765.9	7,639.2	32.8	16.1	-103.14	40.3	-449.5	1,222.0	1,194.8	27.24	44.868	
7,850.0	7,470.1	7,826.4	7,671.9	32.9	16.2	-102.59	-10.6	-451.7	1,226.6	1,199.1	27.55	44.530	
7,900.0	7,488.2	7,887.7	7,700.5	33.1	16.4	-102.14	-64.7	-453.5	1,230.7	1,202.7	27.96	44.020	
7,950.0	7,503.2	7,949.7	7,724.7	33.2	16.6	-101.79	-121.7	-455.1	1,234.1	1,205.6	28.47	43.349	
8,000.0	7,514.9	8,012.2	7,744.0	33.4	16.9	-101.53	-181.2	-456.3	1,236.8	1,207.7	29.09	42.512	
8,050.0	7,523.3	8,075.2	7,758.1	33.6	17.3	-101.34	-242.6	-457.1	1,238.8	1,209.0	29.82	41.545	
8,100.0	7,528.3	8,138.5	7,766.8	33.8	17.7	-101.24	-305.3	-457.5	1,240.1	1,209.4	30.64	40.475	
8,149.7	7,530.0	8,201.7	7,770.0	34.0	18.2	-101.20	-368.4	-457.5	1,240.7	1,209.1	31.54	39.335	
8,200.0	7,530.0	8,252.9	7,770.0	34.2	18.6	-101.20	-419.6	-457.3	1,240.8	1,208.3	32.49	38.187	
8,300.0	7,530.0	8,352.9	7,770.0	34.7	19.5	-101.20	-519.6	-457.0	1,241.2	1,206.6	34.53	35.948	
8,400.0	7,530.0	8,452.9	7,770.0	35.3	20.5	-101.19	-619.6	-456.6	1,241.5	1,204.7	36.77	33.765	
8,500.0	7,530.0	8,552.9	7,770.0	35.9	21.7	-101.19	-719.6	-456.3	1,241.9	1,202.7	39.19	31.691	
8,600.0	7,530.0	8,652.9	7,770.0	36.6	22.9	-101.19	-819.6	-455.9	1,242.2	1,200.5	41.75	29.755	
8,700.0	7,530.0	8,752.9	7,770.0	37.4	24.1	-101.18	-919.6	-455.6	1,242.5	1,198.1	44.43	27.967	
8,800.0	7,530.0	8,852.9	7,770.0	38.3	25.5	-101.18	-1,019.6	-455.2	1,242.9	1,195.7	47.21	26.327	
8,900.0	7,530.0	8,952.9	7,770.0	39.2	26.8	-101.18	-1,119.6	-454.9	1,243.2	1,193.2	50.07	24.829	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1F-7H-A168 - HZ - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
9,000.0	7,530.0	9,052.9	7,770.0	40.1	28.2	-101.17	-1,219.6	-454.5	1,243.6	1,190.6	53.00	23.462	
9,100.0	7,530.0	9,152.9	7,770.0	41.2	29.7	-101.17	-1,319.6	-454.2	1,243.9	1,187.9	55.99	22.215	
9,200.0	7,530.0	9,252.9	7,770.0	42.2	31.2	-101.17	-1,419.6	-453.8	1,244.3	1,185.2	59.03	21.077	
9,300.0	7,530.0	9,352.9	7,770.0	43.3	32.7	-101.17	-1,519.6	-453.5	1,244.6	1,182.5	62.11	20.037	
9,400.0	7,530.0	9,452.9	7,770.0	44.5	34.2	-101.16	-1,619.6	-453.1	1,244.9	1,179.7	65.23	19.085	
9,500.0	7,530.0	9,552.9	7,770.0	45.7	35.8	-101.16	-1,719.6	-452.8	1,245.3	1,176.9	68.38	18.211	
9,600.0	7,530.0	9,652.9	7,770.0	46.9	37.3	-101.16	-1,819.6	-452.4	1,245.6	1,174.1	71.56	17.407	
9,700.0	7,530.0	9,752.9	7,770.0	48.2	38.9	-101.15	-1,919.6	-452.1	1,246.0	1,171.2	74.76	16.667	
9,800.0	7,530.0	9,852.9	7,770.0	49.5	40.5	-101.15	-2,019.5	-451.7	1,246.3	1,168.3	77.98	15.983	
9,900.0	7,530.0	9,952.9	7,770.0	50.8	42.2	-101.15	-2,119.5	-451.4	1,246.7	1,165.4	81.22	15.349	
10,000.0	7,530.0	10,052.9	7,770.0	52.2	43.8	-101.14	-2,219.5	-451.0	1,247.0	1,162.5	84.47	14.762	
10,100.0	7,530.0	10,152.9	7,770.0	53.5	45.4	-101.14	-2,319.5	-450.7	1,247.3	1,159.6	87.74	14.216	
10,200.0	7,530.0	10,252.9	7,770.0	54.9	47.1	-101.14	-2,419.5	-450.3	1,247.7	1,156.7	91.03	13.707	
10,300.0	7,530.0	10,352.9	7,770.0	56.3	48.7	-101.13	-2,519.5	-450.0	1,248.0	1,153.7	94.32	13.232	
10,400.0	7,530.0	10,452.9	7,770.0	57.8	50.4	-101.13	-2,619.5	-449.6	1,248.4	1,150.7	97.63	12.787	
10,500.0	7,530.0	10,552.9	7,770.0	59.2	52.0	-101.13	-2,719.5	-449.3	1,248.7	1,147.8	100.94	12.371	
10,600.0	7,530.0	10,652.9	7,770.0	60.7	53.7	-101.12	-2,819.5	-448.9	1,249.1	1,144.8	104.26	11.980	
10,700.0	7,530.0	10,752.9	7,770.0	62.2	55.4	-101.12	-2,919.5	-448.6	1,249.4	1,141.8	107.59	11.612	
10,800.0	7,530.0	10,852.9	7,770.0	63.7	57.0	-101.12	-3,019.5	-448.2	1,249.7	1,138.8	110.93	11.266	
10,900.0	7,530.0	10,952.9	7,770.0	65.2	58.7	-101.12	-3,119.5	-447.9	1,250.1	1,135.8	114.27	10.939	
11,000.0	7,530.0	11,052.9	7,770.0	66.7	60.4	-101.11	-3,219.5	-447.5	1,250.4	1,132.8	117.62	10.631	
11,100.0	7,530.0	11,152.9	7,770.0	68.3	62.1	-101.11	-3,319.5	-447.2	1,250.8	1,129.8	120.98	10.339	
11,200.0	7,530.0	11,252.9	7,770.0	69.8	63.8	-101.11	-3,419.5	-446.8	1,251.1	1,126.8	124.34	10.062	
11,300.0	7,530.0	11,352.9	7,770.0	71.4	65.5	-101.10	-3,519.5	-446.5	1,251.5	1,123.7	127.70	9.800	
11,400.0	7,530.0	11,452.9	7,770.0	72.9	67.2	-101.10	-3,619.5	-446.1	1,251.8	1,120.7	131.07	9.550	
11,500.0	7,530.0	11,552.9	7,770.0	74.5	68.9	-101.10	-3,719.5	-445.8	1,252.1	1,117.7	134.44	9.313	
11,600.0	7,530.0	11,652.9	7,770.0	76.1	70.6	-101.09	-3,819.5	-445.4	1,252.5	1,114.7	137.82	9.088	
11,700.0	7,530.0	11,752.9	7,770.0	77.7	72.3	-101.09	-3,919.5	-445.1	1,252.8	1,111.6	141.20	8.873	
11,800.0	7,530.0	11,852.9	7,770.0	79.3	74.0	-101.09	-4,019.5	-444.7	1,253.2	1,108.6	144.58	8.667	
11,900.0	7,530.0	11,952.9	7,770.0	80.9	75.7	-101.08	-4,119.5	-444.4	1,253.5	1,105.5	147.97	8.471	
12,000.0	7,530.0	12,052.9	7,770.0	82.5	77.5	-101.08	-4,219.5	-444.0	1,253.9	1,102.5	151.36	8.284	
12,100.0	7,530.0	12,152.9	7,770.0	84.1	79.2	-101.08	-4,319.5	-443.7	1,254.2	1,099.4	154.75	8.105	
12,200.0	7,530.0	12,252.9	7,770.0	85.7	80.9	-101.08	-4,419.5	-443.3	1,254.5	1,096.4	158.14	7.933	
12,300.0	7,530.0	12,352.9	7,770.0	87.3	82.6	-101.07	-4,519.5	-443.0	1,254.9	1,093.3	161.54	7.768	
12,400.0	7,530.0	12,452.9	7,770.0	89.0	84.3	-101.07	-4,619.5	-442.6	1,255.2	1,090.3	164.93	7.610	
12,500.0	7,530.0	12,552.9	7,770.0	90.6	86.1	-101.07	-4,719.5	-442.3	1,255.6	1,087.2	168.33	7.459	
12,600.0	7,530.0	12,652.9	7,770.0	92.2	87.8	-101.06	-4,819.5	-441.9	1,255.9	1,084.2	171.74	7.313	
12,700.0	7,530.0	12,752.9	7,770.0	93.9	89.5	-101.06	-4,919.5	-441.6	1,256.2	1,081.1	175.14	7.173	
12,800.0	7,530.0	12,852.9	7,770.0	95.5	91.2	-101.06	-5,019.5	-441.2	1,256.6	1,078.0	178.54	7.038	
12,900.0	7,530.0	12,952.9	7,770.0	97.2	93.0	-101.05	-5,119.5	-440.9	1,256.9	1,075.0	181.95	6.908	
13,000.0	7,530.0	13,052.9	7,770.0	98.8	94.7	-101.05	-5,219.5	-440.5	1,257.3	1,071.9	185.36	6.783	
13,100.0	7,530.0	13,152.9	7,770.0	100.5	96.4	-101.05	-5,319.5	-440.2	1,257.6	1,068.9	188.77	6.662	
13,200.0	7,530.0	13,252.9	7,770.0	102.1	98.1	-101.05	-5,419.5	-439.8	1,258.0	1,065.8	192.18	6.546	
13,300.0	7,530.0	13,352.9	7,770.0	103.8	99.9	-101.04	-5,519.5	-439.5	1,258.3	1,062.7	195.59	6.433	
13,400.0	7,530.0	13,452.9	7,770.0	105.5	101.6	-101.04	-5,619.5	-439.1	1,258.6	1,059.6	199.01	6.325	
13,500.0	7,530.0	13,552.9	7,770.0	107.1	103.3	-101.04	-5,719.5	-438.8	1,259.0	1,056.6	202.42	6.220	
13,600.0	7,530.0	13,652.9	7,770.0	108.8	105.1	-101.03	-5,819.5	-438.4	1,259.3	1,053.5	205.84	6.118	
13,700.0	7,530.0	13,752.9	7,770.0	110.5	106.8	-101.03	-5,919.5	-438.1	1,259.7	1,050.4	209.25	6.020	
13,800.0	7,530.0	13,852.9	7,770.0	112.2	108.5	-101.03	-6,019.5	-437.7	1,260.0	1,047.3	212.67	5.925	
13,900.0	7,530.0	13,952.9	7,770.0	113.9	110.3	-101.02	-6,119.5	-437.4	1,260.4	1,044.3	216.09	5.833	
14,000.0	7,530.0	14,052.9	7,770.0	115.5	112.0	-101.02	-6,219.5	-437.0	1,260.7	1,041.2	219.51	5.743	
14,100.0	7,530.0	14,152.9	7,770.0	117.2	113.7	-101.02	-6,319.5	-436.7	1,261.0	1,038.1	222.93	5.657	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1F-7H-A168 - HZ - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
14,200.0	7,530.0	14,252.9	7,770.0	118.9	115.5	-101.01	-6,419.5	-436.3	1,261.4	1,035.0	226.35	5.573	
14,300.0	7,530.0	14,352.9	7,770.0	120.6	117.2	-101.01	-6,519.5	-436.0	1,261.7	1,032.0	229.77	5.491	
14,400.0	7,530.0	14,452.9	7,770.0	122.3	118.9	-101.01	-6,619.5	-435.6	1,262.1	1,028.9	233.20	5.412	
14,500.0	7,530.0	14,552.9	7,770.0	124.0	120.7	-101.01	-6,719.5	-435.3	1,262.4	1,025.8	236.62	5.335	
14,600.0	7,530.0	14,652.9	7,770.0	125.7	122.4	-101.00	-6,819.5	-435.0	1,262.8	1,022.7	240.05	5.261	
14,700.0	7,530.0	14,752.9	7,770.0	127.4	124.2	-101.00	-6,919.5	-434.6	1,263.1	1,019.6	243.47	5.188	
14,800.0	7,530.0	14,852.9	7,770.0	129.1	125.9	-101.00	-7,019.5	-434.3	1,263.4	1,016.6	246.90	5.117	
14,900.0	7,530.0	14,952.9	7,770.0	130.8	127.6	-100.99	-7,119.5	-433.9	1,263.8	1,013.5	250.32	5.049	
15,000.0	7,530.0	15,052.9	7,770.0	132.5	129.4	-100.99	-7,219.5	-433.6	1,264.1	1,010.4	253.75	4.982	
15,100.0	7,530.0	15,152.9	7,770.0	134.2	131.1	-100.99	-7,319.5	-433.2	1,264.5	1,007.3	257.18	4.917	
15,200.0	7,530.0	15,252.9	7,770.0	135.9	132.9	-100.98	-7,419.5	-432.9	1,264.8	1,004.2	260.61	4.853	
15,300.0	7,530.0	15,352.9	7,770.0	137.6	134.6	-100.98	-7,519.5	-432.5	1,265.2	1,001.1	264.04	4.792	
15,400.0	7,530.0	15,452.9	7,770.0	139.3	136.3	-100.98	-7,619.5	-432.2	1,265.5	998.0	267.46	4.731	
15,500.0	7,530.0	15,552.9	7,770.0	141.0	138.1	-100.98	-7,719.5	-431.8	1,265.8	995.0	270.89	4.673	
15,600.0	7,530.0	15,652.9	7,770.0	142.7	139.8	-100.97	-7,819.5	-431.5	1,266.2	991.9	274.33	4.616	
15,700.0	7,530.0	15,752.9	7,770.0	144.4	141.6	-100.97	-7,919.5	-431.1	1,266.5	988.8	277.76	4.560	
15,800.0	7,530.0	15,852.9	7,770.0	146.1	143.3	-100.97	-8,019.5	-430.8	1,266.9	985.7	281.19	4.505	
15,900.0	7,530.0	15,952.9	7,770.0	147.8	145.1	-100.96	-8,119.5	-430.4	1,267.2	982.6	284.62	4.452	
16,000.0	7,530.0	16,052.9	7,770.0	149.5	146.8	-100.96	-8,219.5	-430.1	1,267.6	979.5	288.05	4.400	
16,100.0	7,530.0	16,152.9	7,770.0	151.2	148.5	-100.96	-8,319.5	-429.7	1,267.9	976.4	291.48	4.350	
16,200.0	7,530.0	16,252.9	7,770.0	153.0	150.3	-100.95	-8,419.5	-429.4	1,268.2	973.3	294.92	4.300	
16,300.0	7,530.0	16,352.9	7,770.0	154.7	152.0	-100.95	-8,519.5	-429.0	1,268.6	970.2	298.35	4.252	
16,400.0	7,530.0	16,452.9	7,770.0	156.4	153.8	-100.95	-8,619.5	-428.7	1,268.9	967.1	301.78	4.205	
16,500.0	7,530.0	16,552.9	7,770.0	158.1	155.5	-100.95	-8,719.5	-428.3	1,269.3	964.1	305.22	4.159	
16,600.0	7,530.0	16,652.9	7,770.0	159.8	157.3	-100.94	-8,819.5	-428.0	1,269.6	961.0	308.65	4.113	
16,700.0	7,530.0	16,752.9	7,770.0	161.5	159.0	-100.94	-8,919.5	-427.6	1,270.0	957.9	312.09	4.069	
16,800.0	7,530.0	16,852.9	7,770.0	163.3	160.8	-100.94	-9,019.5	-427.3	1,270.3	954.8	315.52	4.026	
16,900.0	7,530.0	16,952.9	7,770.0	165.0	162.5	-100.93	-9,119.5	-426.9	1,270.6	951.7	318.96	3.984	
17,000.0	7,530.0	17,052.9	7,770.0	166.7	164.2	-100.93	-9,219.5	-426.6	1,271.0	948.6	322.40	3.942	
17,100.0	7,530.0	17,152.9	7,770.0	168.4	166.0	-100.93	-9,319.5	-426.2	1,271.3	945.5	325.83	3.902	
17,200.0	7,530.0	17,252.9	7,770.0	170.1	167.7	-100.92	-9,419.5	-425.9	1,271.7	942.4	329.27	3.862	
17,300.0	7,530.0	17,352.9	7,770.0	171.9	169.5	-100.92	-9,519.5	-425.5	1,272.0	939.3	332.71	3.823	
17,400.0	7,530.0	17,452.9	7,770.0	173.6	171.2	-100.92	-9,619.5	-425.2	1,272.4	936.2	336.14	3.785	
17,500.0	7,530.0	17,552.9	7,770.0	175.3	173.0	-100.92	-9,719.5	-424.8	1,272.7	933.1	339.58	3.748	
17,589.7	7,530.0	17,642.6	7,770.0	176.9	174.5	-100.91	-9,809.2	-424.5	1,273.0	930.3	342.67	3.715	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1G-7H-A168 - HZ - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	90.35	-0.4	60.2	60.2				
100.0	100.0	99.0	99.0	0.2	0.2	90.35	-0.4	60.2	60.2	59.9	0.30	199.129	
200.0	200.0	199.0	199.0	0.3	0.3	90.35	-0.4	60.2	60.2	59.5	0.65	92.427	CC, ES
300.0	300.0	299.0	299.0	0.5	0.5	167.60	-0.4	60.2	61.0	60.0	1.00	61.021	
400.0	400.0	399.0	399.0	0.7	0.7	168.10	-0.4	60.2	63.6	62.2	1.35	47.136	
500.0	499.9	498.9	498.9	0.9	0.8	168.85	-0.4	60.2	67.9	66.2	1.70	39.972	
600.0	599.7	599.2	599.2	1.1	1.0	169.16	0.4	59.8	73.5	71.4	2.05	35.894	
700.0	699.4	699.6	699.5	1.3	1.2	168.51	2.8	58.8	80.1	77.7	2.40	33.378	
800.0	798.9	799.8	799.7	1.5	1.4	167.14	6.9	57.1	87.7	85.0	2.76	31.800	
900.0	898.3	899.7	899.4	1.8	1.6	165.41	12.3	54.8	96.5	93.4	3.12	30.883	
1,000.0	997.4	999.1	998.6	2.0	1.8	164.11	17.8	52.4	107.0	103.5	3.50	30.590	
1,100.0	1,096.3	1,098.4	1,097.7	2.3	2.0	163.28	23.4	50.1	119.1	115.2	3.87	30.758	
1,200.0	1,194.9	1,197.4	1,196.6	2.7	2.2	162.81	28.9	47.7	132.9	128.7	4.25	31.266	
1,300.0	1,293.3	1,296.2	1,295.2	3.0	2.3	162.63	34.4	45.4	148.4	143.8	4.63	32.033	
1,400.0	1,391.2	1,394.7	1,393.5	3.4	2.5	162.65	40.0	43.0	165.5	160.5	5.02	33.004	
1,500.0	1,488.9	1,493.0	1,491.5	3.8	2.7	162.81	45.5	40.7	184.3	178.9	5.40	34.140	
1,600.0	1,586.1	1,590.8	1,589.3	4.3	2.9	163.08	50.9	38.4	204.7	198.9	5.78	35.412	
1,659.9	1,644.1	1,649.3	1,647.6	4.5	3.1	163.27	54.2	37.0	217.7	211.7	6.01	36.232	
1,700.0	1,683.0	1,688.4	1,686.6	4.7	3.1	163.42	56.4	36.1	226.6	220.5	6.17	36.757	
1,800.0	1,779.7	1,785.9	1,783.9	5.2	3.3	163.76	61.9	33.7	248.8	242.3	6.56	37.954	
1,900.0	1,876.5	1,883.4	1,881.3	5.6	3.5	164.05	67.3	31.4	271.1	264.1	6.95	39.016	
2,000.0	1,973.3	1,980.9	1,978.6	6.1	3.7	164.29	72.8	29.1	293.3	285.9	7.34	39.964	
2,100.0	2,070.0	2,078.4	2,075.9	6.6	3.9	164.49	78.2	26.8	315.5	307.8	7.73	40.815	
2,200.0	2,166.8	2,175.9	2,173.2	7.1	4.1	164.67	83.7	24.5	337.7	329.6	8.12	41.583	
2,300.0	2,263.6	2,273.4	2,270.5	7.5	4.3	164.83	89.1	22.2	360.0	351.5	8.51	42.281	
2,400.0	2,360.4	2,370.8	2,367.8	8.0	4.5	164.97	94.6	19.8	382.2	373.3	8.91	42.916	
2,500.0	2,457.1	2,468.3	2,465.1	8.5	4.7	165.09	100.1	17.5	404.5	395.2	9.30	43.498	
2,600.0	2,553.9	2,565.8	2,562.4	9.0	4.9	165.20	105.5	15.2	426.7	417.0	9.69	44.032	
2,700.0	2,650.7	2,663.3	2,659.7	9.4	5.1	165.30	111.0	12.9	449.0	438.9	10.08	44.524	
2,800.0	2,747.4	2,760.8	2,757.1	9.9	5.3	165.39	116.4	10.6	471.2	460.7	10.48	44.979	
2,900.0	2,844.2	2,858.3	2,854.4	10.4	5.5	165.48	121.9	8.2	493.4	482.6	10.87	45.401	
3,000.0	2,941.0	2,955.8	2,951.7	10.9	5.7	165.55	127.3	5.9	515.7	504.4	11.26	45.793	
3,100.0	3,037.8	3,053.3	3,049.0	11.4	5.9	165.62	132.8	3.6	537.9	526.3	11.65	46.159	
3,200.0	3,134.5	3,150.8	3,146.3	11.9	6.1	165.68	138.3	1.3	560.2	548.1	12.05	46.501	
3,300.0	3,231.3	3,248.3	3,243.6	12.3	6.3	165.74	143.7	-1.0	582.4	570.0	12.44	46.821	
3,400.0	3,328.1	3,345.8	3,340.9	12.8	6.5	165.80	149.2	-3.3	604.7	591.9	12.83	47.121	
3,500.0	3,424.8	3,443.3	3,438.2	13.3	6.7	165.85	154.6	-5.7	626.9	613.7	13.23	47.404	
3,600.0	3,521.6	3,540.7	3,535.5	13.8	6.9	165.89	160.1	-8.0	649.2	635.6	13.62	47.669	
3,700.0	3,618.4	3,638.2	3,632.9	14.3	7.1	165.94	165.5	-10.3	671.4	657.4	14.01	47.920	
3,800.0	3,715.2	3,735.7	3,730.2	14.7	7.3	165.98	171.0	-12.6	693.7	679.3	14.40	48.158	
3,900.0	3,811.9	3,833.2	3,827.5	15.2	7.5	166.02	176.5	-14.9	715.9	701.1	14.80	48.382	
4,000.0	3,908.7	3,930.7	3,924.8	15.7	7.7	166.05	181.9	-17.2	738.2	723.0	15.19	48.595	
4,100.0	4,005.5	4,028.2	4,022.1	16.2	7.9	166.09	187.4	-19.6	760.4	744.9	15.58	48.797	
4,200.0	4,102.2	4,125.7	4,119.4	16.7	8.1	166.12	192.8	-21.9	782.7	766.7	15.98	48.989	
4,300.0	4,199.0	4,223.2	4,216.7	17.2	8.3	166.15	198.3	-24.2	804.9	788.6	16.37	49.172	
4,400.0	4,295.8	4,320.7	4,314.0	17.6	8.5	166.18	203.7	-26.5	827.2	810.4	16.76	49.346	
4,500.0	4,392.6	4,418.2	4,411.4	18.1	8.7	166.21	209.2	-28.8	849.5	832.3	17.16	49.512	
4,600.0	4,489.3	4,515.7	4,508.7	18.6	8.9	166.23	214.7	-31.2	871.7	854.2	17.55	49.671	
4,700.0	4,586.1	4,613.2	4,606.0	19.1	9.1	166.26	220.1	-33.5	894.0	876.0	17.94	49.822	
4,800.0	4,682.9	4,710.6	4,703.3	19.6	9.3	166.28	225.6	-35.8	916.2	897.9	18.34	49.967	
4,900.0	4,779.6	4,808.1	4,800.6	20.1	9.5	166.30	231.0	-38.1	938.5	919.7	18.73	50.106	
5,000.0	4,876.4	4,905.6	4,897.9	20.6	9.7	166.32	236.5	-40.4	960.7	941.6	19.12	50.239	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1G-7H-A168 - HZ - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,100.0	4,973.2	5,003.1	4,995.2	21.0	9.9	166.34	241.9	-42.7	983.0	963.5	19.52	50.367	
5,200.0	5,070.0	5,100.6	5,092.5	21.5	10.1	166.36	247.4	-45.1	1,005.2	985.3	19.91	50.490	
5,300.0	5,166.7	5,198.1	5,189.8	22.0	10.3	166.38	252.9	-47.4	1,027.5	1,007.2	20.30	50.608	
5,400.0	5,263.5	5,295.6	5,287.2	22.5	10.5	166.40	258.3	-49.7	1,049.7	1,029.0	20.70	50.721	
5,500.0	5,360.3	5,393.1	5,384.5	23.0	10.7	166.42	263.8	-52.0	1,072.0	1,050.9	21.09	50.831	
5,600.0	5,457.0	5,490.6	5,481.8	23.5	10.9	166.43	269.2	-54.3	1,094.2	1,072.8	21.48	50.936	
5,700.0	5,553.8	5,588.1	5,579.1	23.9	11.1	166.45	274.7	-56.6	1,116.5	1,094.6	21.88	51.037	
5,800.0	5,650.6	5,685.6	5,676.4	24.4	11.3	166.46	280.1	-59.0	1,138.8	1,116.5	22.27	51.135	
5,900.0	5,747.4	5,783.1	5,773.7	24.9	11.5	166.48	285.6	-61.3	1,161.0	1,138.3	22.66	51.229	
6,000.0	5,844.1	5,880.5	5,871.0	25.4	11.7	166.49	291.1	-63.6	1,183.3	1,160.2	23.06	51.321	
6,100.0	5,940.9	5,978.0	5,968.3	25.9	11.9	166.51	296.5	-65.9	1,205.5	1,182.1	23.45	51.409	
6,200.0	6,037.7	6,075.5	6,065.6	26.4	12.1	166.52	302.0	-68.2	1,227.8	1,203.9	23.84	51.494	
6,300.0	6,134.4	6,173.0	6,163.0	26.8	12.3	166.53	307.4	-70.6	1,250.0	1,225.8	24.24	51.576	
6,400.0	6,231.2	6,270.5	6,260.3	27.3	12.5	166.54	312.9	-72.9	1,272.3	1,247.6	24.63	51.656	
6,500.0	6,328.0	6,368.0	6,357.6	27.8	12.7	166.55	318.3	-75.2	1,294.5	1,269.5	25.02	51.733	
6,600.0	6,424.8	6,465.5	6,454.9	28.3	12.9	166.57	323.8	-77.5	1,316.8	1,291.4	25.42	51.808	
6,700.0	6,521.5	6,563.0	6,552.2	28.8	13.1	166.58	329.3	-79.8	1,339.0	1,313.2	25.81	51.881	
6,800.0	6,618.3	6,660.5	6,649.5	29.3	13.3	166.59	334.7	-82.1	1,361.3	1,335.1	26.20	51.951	
6,900.0	6,715.1	6,758.0	6,746.8	29.8	13.5	166.60	340.2	-84.5	1,383.6	1,357.0	26.60	52.019	
6,984.3	6,796.7	6,841.1	6,829.9	30.2	13.6	166.70	342.6	-86.4	1,402.3	1,375.4	26.88	52.172	
7,000.0	6,811.9	6,856.6	6,845.3	30.2	13.6	171.81	342.1	-86.8	1,405.8	1,378.9	26.84	52.367	
7,050.0	6,860.3	6,905.7	6,894.3	30.5	13.6	-171.47	338.3	-88.0	1,416.9	1,390.2	26.71	53.052	
7,100.0	6,908.6	6,954.6	6,942.6	30.7	13.7	-155.87	331.2	-89.3	1,427.9	1,401.4	26.55	53.778	
7,150.0	6,956.6	7,003.3	6,990.2	30.9	13.7	-142.86	320.8	-90.5	1,438.9	1,412.5	26.39	54.515	
7,200.0	7,004.0	7,051.9	7,036.8	31.1	13.6	-132.61	307.3	-91.7	1,449.7	1,423.5	26.25	55.236	
7,250.0	7,050.6	7,100.3	7,082.2	31.2	13.6	-124.66	290.7	-92.9	1,460.3	1,434.2	26.12	55.913	
7,300.0	7,096.1	7,148.5	7,126.3	31.4	13.5	-118.43	271.1	-94.1	1,470.7	1,444.7	26.02	56.521	
7,350.0	7,140.4	7,196.7	7,168.9	31.6	13.5	-113.47	248.7	-95.3	1,480.7	1,454.8	25.96	57.038	
7,400.0	7,183.1	7,244.7	7,209.8	31.7	13.4	-109.44	223.5	-96.5	1,490.4	1,464.5	25.94	57.447	
7,450.0	7,224.2	7,292.7	7,248.9	31.8	13.4	-106.11	195.7	-97.6	1,499.7	1,473.7	25.97	57.737	
7,500.0	7,263.4	7,340.7	7,285.9	32.0	13.4	-103.32	165.3	-98.7	1,508.5	1,482.4	26.05	57.901	
7,550.0	7,300.5	7,388.5	7,320.8	32.1	13.3	-100.95	132.6	-99.8	1,516.8	1,490.6	26.18	57.936	
7,600.0	7,335.4	7,436.4	7,353.5	32.2	13.3	-98.93	97.6	-100.8	1,524.6	1,498.2	26.36	57.842	
7,650.0	7,367.8	7,484.2	7,383.7	32.4	13.4	-97.20	60.6	-101.8	1,531.8	1,505.2	26.58	57.624	
7,700.0	7,397.6	7,532.0	7,411.3	32.5	13.4	-95.71	21.6	-102.8	1,538.4	1,511.5	26.85	57.286	
7,750.0	7,424.7	7,579.8	7,436.3	32.6	13.5	-94.43	-19.1	-103.7	1,544.3	1,517.2	27.17	56.840	
7,800.0	7,448.9	7,627.5	7,458.5	32.8	13.7	-93.35	-61.4	-104.5	1,549.6	1,522.1	27.53	56.279	
10,500.0	7,530.0	10,311.7	7,530.0	59.2	51.5	-90.04	-2,734.6	-124.9	1,549.7	1,447.0	102.65	15.096	
10,600.0	7,530.0	10,411.7	7,530.0	60.7	53.2	-90.04	-2,834.6	-125.6	1,549.0	1,442.9	106.05	14.606	
10,700.0	7,530.0	10,511.7	7,530.0	62.2	54.9	-90.04	-2,934.6	-126.3	1,548.3	1,438.8	109.45	14.146	
10,800.0	7,530.0	10,611.7	7,530.0	63.7	56.6	-90.04	-3,034.6	-127.0	1,547.6	1,434.7	112.86	13.713	
10,900.0	7,530.0	10,711.7	7,530.0	65.2	58.3	-90.04	-3,134.6	-127.7	1,546.9	1,430.6	116.27	13.304	
11,000.0	7,530.0	10,811.7	7,530.0	66.7	60.0	-90.04	-3,234.6	-128.4	1,546.2	1,426.5	119.69	12.918	
11,100.0	7,530.0	10,911.7	7,530.0	68.3	61.7	-90.04	-3,334.6	-129.1	1,545.5	1,422.4	123.11	12.553	
11,200.0	7,530.0	11,011.7	7,530.0	69.8	63.4	-90.04	-3,434.6	-129.8	1,544.8	1,418.2	126.54	12.208	
11,300.0	7,530.0	11,111.7	7,530.0	71.4	65.1	-90.04	-3,534.6	-130.5	1,544.1	1,414.1	129.97	11.880	
11,400.0	7,530.0	11,211.7	7,530.0	72.9	66.8	-90.04	-3,634.6	-131.2	1,543.4	1,410.0	133.41	11.569	
11,500.0	7,530.0	11,311.7	7,530.0	74.5	68.6	-90.04	-3,734.6	-131.9	1,542.7	1,405.8	136.85	11.273	
11,600.0	7,530.0	11,411.7	7,530.0	76.1	70.3	-90.04	-3,834.6	-132.6	1,542.0	1,401.7	140.30	10.991	
11,700.0	7,530.0	11,511.7	7,530.0	77.7	72.0	-90.04	-3,934.6	-133.2	1,541.3	1,397.5	143.74	10.723	
11,800.0	7,530.0	11,611.7	7,530.0	79.3	73.7	-90.04	-4,034.6	-133.9	1,540.6	1,393.4	147.19	10.467	
11,900.0	7,530.0	11,711.7	7,530.0	80.9	75.5	-90.04	-4,134.6	-134.6	1,539.9	1,389.2	150.64	10.222	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1G-7H-A168 - HZ - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
12,000.0	7,530.0	11,811.7	7,530.0	82.5	77.2	-90.04	-4,234.6	-135.3	1,539.2	1,385.1	154.10	9.988	
12,100.0	7,530.0	11,911.7	7,530.0	84.1	78.9	-90.04	-4,334.6	-136.0	1,538.5	1,380.9	157.56	9.765	
12,200.0	7,530.0	12,011.7	7,530.0	85.7	80.6	-90.04	-4,434.6	-136.7	1,537.8	1,376.8	161.02	9.551	
12,300.0	7,530.0	12,111.7	7,530.0	87.3	82.4	-90.04	-4,534.5	-137.4	1,537.1	1,372.6	164.48	9.345	
12,400.0	7,530.0	12,211.7	7,530.0	89.0	84.1	-90.04	-4,634.5	-138.1	1,536.4	1,368.5	167.94	9.148	
12,500.0	7,530.0	12,311.7	7,530.0	90.6	85.8	-90.04	-4,734.5	-138.8	1,535.7	1,364.3	171.41	8.959	
12,600.0	7,530.0	12,411.6	7,530.0	92.2	87.6	-90.04	-4,834.5	-139.5	1,535.0	1,360.1	174.87	8.778	
12,700.0	7,530.0	12,511.6	7,530.0	93.9	89.3	-90.04	-4,934.5	-140.2	1,534.3	1,356.0	178.34	8.603	
12,800.0	7,530.0	12,611.6	7,530.0	95.5	91.0	-90.04	-5,034.5	-140.9	1,533.6	1,351.8	181.81	8.435	
12,900.0	7,530.0	12,711.6	7,530.0	97.2	92.8	-90.04	-5,134.5	-141.6	1,532.9	1,347.6	185.28	8.273	
13,000.0	7,530.0	12,811.6	7,530.0	98.8	94.5	-90.04	-5,234.5	-142.3	1,532.2	1,343.5	188.76	8.117	
13,100.0	7,530.0	12,911.6	7,530.0	100.5	96.2	-90.04	-5,334.5	-143.0	1,531.5	1,339.3	192.23	7.967	
13,200.0	7,530.0	13,011.6	7,530.0	102.1	98.0	-90.04	-5,434.5	-143.7	1,530.8	1,335.1	195.71	7.822	
13,300.0	7,530.0	13,111.6	7,530.0	103.8	99.7	-90.04	-5,534.5	-144.4	1,530.1	1,330.9	199.18	7.682	
13,400.0	7,530.0	13,211.6	7,530.0	105.5	101.5	-90.04	-5,634.5	-145.1	1,529.4	1,326.8	202.66	7.547	
13,500.0	7,530.0	13,311.6	7,530.0	107.1	103.2	-90.04	-5,734.5	-145.8	1,528.7	1,322.6	206.14	7.416	
13,600.0	7,530.0	13,411.6	7,530.0	108.8	104.9	-90.04	-5,834.5	-146.5	1,528.0	1,318.4	209.62	7.290	
13,700.0	7,530.0	13,511.6	7,530.0	110.5	106.7	-90.04	-5,934.5	-147.2	1,527.3	1,314.2	213.10	7.167	
13,800.0	7,530.0	13,611.6	7,530.0	112.2	108.4	-90.04	-6,034.5	-147.9	1,526.6	1,310.0	216.58	7.049	
13,900.0	7,530.0	13,711.6	7,530.0	113.9	110.2	-90.04	-6,134.5	-148.6	1,525.9	1,305.9	220.06	6.934	
14,000.0	7,530.0	13,811.6	7,530.0	115.5	111.9	-90.04	-6,234.5	-149.3	1,525.2	1,301.7	223.55	6.823	
14,100.0	7,530.0	13,911.6	7,530.0	117.2	113.6	-90.04	-6,334.5	-150.0	1,524.5	1,297.5	227.03	6.715	
14,200.0	7,530.0	14,011.6	7,530.0	118.9	115.4	-90.04	-6,434.5	-150.7	1,523.8	1,293.3	230.51	6.611	
14,300.0	7,530.0	14,111.6	7,530.0	120.6	117.1	-90.04	-6,534.4	-151.4	1,523.1	1,289.1	234.00	6.509	
14,400.0	7,530.0	14,211.6	7,530.0	122.3	118.9	-90.04	-6,634.4	-152.1	1,522.4	1,285.0	237.49	6.411	
14,500.0	7,530.0	14,311.6	7,530.0	124.0	120.6	-90.04	-6,734.4	-152.8	1,521.7	1,280.8	240.97	6.315	
14,600.0	7,530.0	14,411.6	7,530.0	125.7	122.4	-90.04	-6,834.4	-153.5	1,521.0	1,276.6	244.46	6.222	
14,700.0	7,530.0	14,511.6	7,530.0	127.4	124.1	-90.04	-6,934.4	-154.2	1,520.3	1,272.4	247.95	6.132	
14,800.0	7,530.0	14,611.6	7,530.0	129.1	125.8	-90.04	-7,034.4	-154.9	1,519.6	1,268.2	251.44	6.044	
14,900.0	7,530.0	14,711.6	7,530.0	130.8	127.6	-90.04	-7,134.4	-155.6	1,519.0	1,264.0	254.92	5.958	
15,000.0	7,530.0	14,811.6	7,530.0	132.5	129.3	-90.04	-7,234.4	-156.3	1,518.3	1,259.8	258.41	5.875	
15,100.0	7,530.0	14,911.6	7,530.0	134.2	131.1	-90.04	-7,334.4	-157.0	1,517.6	1,255.7	261.90	5.794	
15,200.0	7,530.0	15,011.6	7,530.0	135.9	132.8	-90.04	-7,434.4	-157.7	1,516.9	1,251.5	265.39	5.715	
15,300.0	7,530.0	15,111.6	7,530.0	137.6	134.6	-90.04	-7,534.4	-158.4	1,516.2	1,247.3	268.89	5.639	
15,400.0	7,530.0	15,211.6	7,530.0	139.3	136.3	-90.04	-7,634.4	-159.1	1,515.5	1,243.1	272.38	5.564	
15,500.0	7,530.0	15,311.6	7,530.0	141.0	138.1	-90.04	-7,734.4	-159.8	1,514.8	1,238.9	275.87	5.491	
15,600.0	7,530.0	15,411.6	7,530.0	142.7	139.8	-90.04	-7,834.4	-160.5	1,514.1	1,234.7	279.36	5.420	
15,700.0	7,530.0	15,511.6	7,530.0	144.4	141.5	-90.04	-7,934.4	-161.2	1,513.4	1,230.5	282.85	5.350	
15,800.0	7,530.0	15,611.6	7,530.0	146.1	143.3	-90.04	-8,034.4	-161.9	1,512.7	1,226.3	286.35	5.283	
15,900.0	7,530.0	15,711.6	7,530.0	147.8	145.0	-90.04	-8,134.4	-162.6	1,512.0	1,222.1	289.84	5.217	
16,000.0	7,530.0	15,811.6	7,530.0	149.5	146.8	-90.04	-8,234.4	-163.3	1,511.3	1,217.9	293.33	5.152	
16,100.0	7,530.0	15,911.6	7,530.0	151.2	148.5	-90.04	-8,334.4	-164.0	1,510.6	1,213.8	296.83	5.089	
16,200.0	7,530.0	16,011.6	7,530.0	153.0	150.3	-90.04	-8,434.4	-164.7	1,509.9	1,209.6	300.32	5.028	
16,300.0	7,530.0	16,111.6	7,530.0	154.7	152.0	-90.04	-8,534.4	-165.4	1,509.2	1,205.4	303.82	4.967	
16,400.0	7,530.0	16,211.6	7,530.0	156.4	153.8	-90.04	-8,634.3	-166.0	1,508.5	1,201.2	307.31	4.909	
16,500.0	7,530.0	16,311.6	7,530.0	158.1	155.5	-90.04	-8,734.3	-166.7	1,507.8	1,197.0	310.81	4.851	
16,600.0	7,530.0	16,411.6	7,530.0	159.8	157.3	-90.04	-8,834.3	-167.4	1,507.1	1,192.8	314.30	4.795	
16,700.0	7,530.0	16,511.5	7,530.0	161.5	159.0	-90.04	-8,934.3	-168.1	1,506.4	1,188.6	317.80	4.740	
16,800.0	7,530.0	16,611.5	7,530.0	163.3	160.8	-90.04	-9,034.3	-168.8	1,505.7	1,184.4	321.29	4.686	
16,900.0	7,530.0	16,711.5	7,530.0	165.0	162.5	-90.04	-9,134.3	-169.5	1,505.0	1,180.2	324.79	4.634	
17,000.0	7,530.0	16,811.5	7,530.0	166.7	164.3	-90.04	-9,234.3	-170.2	1,504.3	1,176.0	328.29	4.582	
17,100.0	7,530.0	16,911.5	7,530.0	168.4	166.0	-90.04	-9,334.3	-170.9	1,503.6	1,171.8	331.78	4.532	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1G-7H-A168 - HZ - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
17,200.0	7,530.0	17,011.5	7,530.0	170.1	167.8	-90.04	-9,434.3	-171.6	1,502.9	1,167.6	335.28	4.483	
17,300.0	7,530.0	17,111.5	7,530.0	171.9	169.5	-90.04	-9,534.3	-172.3	1,502.2	1,163.4	338.78	4.434	
17,400.0	7,530.0	17,211.5	7,530.0	173.6	171.3	-90.04	-9,634.3	-173.0	1,501.5	1,159.2	342.27	4.387	
17,500.0	7,530.0	17,311.5	7,530.0	175.3	173.0	-90.04	-9,734.3	-173.7	1,500.8	1,155.0	345.77	4.340	
17,589.7	7,530.0	17,401.3	7,530.0	176.9	174.6	-90.04	-9,824.0	-174.4	1,500.2	1,151.3	348.91	4.300 SF	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1H-7H-A168 - HZ - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	90.30	-0.4	70.0	70.0				
100.0	100.0	99.0	99.0	0.2	0.2	90.30	-0.4	70.0	70.0	69.7	0.30	231.544	
200.0	200.0	199.0	199.0	0.3	0.3	90.30	-0.4	70.0	70.0	69.3	0.65	107.473	CC, ES
300.0	300.0	299.0	299.0	0.5	0.5	167.53	-0.4	70.0	70.8	69.8	1.00	70.816	
400.0	400.0	399.0	399.0	0.7	0.7	167.96	-0.4	70.0	73.4	72.0	1.35	54.396	
500.0	499.9	498.9	498.9	0.9	0.8	168.63	-0.4	70.0	77.6	75.9	1.70	45.739	
600.0	599.7	598.7	598.7	1.1	1.0	169.30	-0.2	70.0	83.6	81.6	2.05	40.877	
700.0	699.4	698.4	698.4	1.3	1.2	169.12	1.6	70.0	91.3	88.9	2.40	38.114	
800.0	798.9	798.0	797.9	1.5	1.4	168.16	5.0	70.0	100.7	97.9	2.75	36.610	
900.0	898.3	897.4	897.1	1.8	1.6	166.73	10.0	70.1	111.7	108.6	3.11	35.930	
1,000.0	997.4	996.5	996.1	2.0	1.7	165.58	15.4	70.2	124.6	121.1	3.48	35.845	SF
1,100.0	1,096.3	1,095.4	1,094.9	2.3	1.9	164.83	20.8	70.3	139.1	135.3	3.84	36.187	
1,200.0	1,194.9	1,194.1	1,193.4	2.7	2.1	164.38	26.1	70.4	155.3	151.1	4.22	36.844	
1,300.0	1,293.3	1,292.5	1,291.7	3.0	2.3	164.16	31.5	70.4	173.2	168.6	4.59	37.741	
1,400.0	1,391.2	1,390.5	1,389.6	3.4	2.5	164.12	36.8	70.5	192.7	187.8	4.96	38.826	
1,500.0	1,488.9	1,488.3	1,487.2	3.8	2.7	164.20	42.1	70.6	213.9	208.6	5.34	40.063	
1,600.0	1,586.1	1,585.6	1,584.4	4.3	2.9	164.36	47.4	70.7	236.7	231.0	5.71	41.425	
1,659.9	1,644.1	1,643.7	1,642.4	4.5	3.0	164.50	50.5	70.7	251.2	245.2	5.94	42.295	
1,700.0	1,683.0	1,682.6	1,681.3	4.7	3.1	164.61	52.7	70.7	261.0	255.0	6.09	42.844	
1,800.0	1,779.7	1,779.5	1,778.0	5.2	3.3	164.87	57.9	70.8	285.7	279.2	6.48	44.096	
1,900.0	1,876.5	1,876.5	1,874.8	5.6	3.4	165.08	63.2	70.9	310.3	303.4	6.86	45.205	
2,000.0	1,973.3	1,973.4	1,971.6	6.1	3.6	165.26	68.4	71.0	334.9	327.7	7.25	46.194	
2,100.0	2,070.0	2,070.3	2,068.4	6.6	3.8	165.42	73.7	71.0	359.5	351.9	7.64	47.082	
2,200.0	2,166.8	2,167.2	2,165.1	7.1	4.0	165.56	78.9	71.1	384.2	376.2	8.02	47.882	
2,300.0	2,263.6	2,264.1	2,261.9	7.5	4.2	165.68	84.2	71.2	408.8	400.4	8.41	48.608	
2,400.0	2,360.4	2,361.0	2,358.7	8.0	4.4	165.79	89.5	71.3	433.4	424.6	8.80	49.270	
2,500.0	2,457.1	2,457.9	2,455.4	8.5	4.6	165.88	94.7	71.4	458.1	448.9	9.18	49.874	
2,600.0	2,553.9	2,554.9	2,552.2	9.0	4.8	165.97	100.0	71.4	482.7	473.1	9.57	50.429	
2,700.0	2,650.7	2,651.8	2,649.0	9.4	5.0	166.05	105.2	71.5	507.4	497.4	9.96	50.940	
2,800.0	2,747.4	2,748.7	2,745.8	9.9	5.2	166.12	110.5	71.6	532.0	521.6	10.35	51.413	
2,900.0	2,844.2	2,845.6	2,842.5	10.4	5.4	166.18	115.8	71.7	556.6	545.9	10.74	51.851	
3,000.0	2,941.0	2,942.5	2,939.3	10.9	5.6	166.24	121.0	71.7	581.3	570.1	11.12	52.258	
3,100.0	3,037.8	3,039.4	3,036.1	11.4	5.7	166.29	126.3	71.8	605.9	594.4	11.51	52.637	
3,200.0	3,134.5	3,136.4	3,132.8	11.9	5.9	166.34	131.5	71.9	630.5	618.7	11.90	52.991	
3,300.0	3,231.3	3,233.3	3,229.6	12.3	6.1	166.39	136.8	72.0	655.2	642.9	12.29	53.323	
3,400.0	3,328.1	3,330.2	3,326.4	12.8	6.3	166.43	142.1	72.0	679.8	667.2	12.68	53.634	
3,500.0	3,424.8	3,427.1	3,423.2	13.3	6.5	166.47	147.3	72.1	704.5	691.4	13.06	53.926	
3,600.0	3,521.6	3,524.0	3,519.9	13.8	6.7	166.51	152.6	72.2	729.1	715.7	13.45	54.201	
3,700.0	3,618.4	3,620.9	3,616.7	14.3	6.9	166.54	157.8	72.3	753.8	739.9	13.84	54.461	
3,800.0	3,715.2	3,717.8	3,713.5	14.7	7.1	166.58	163.1	72.3	778.4	764.2	14.23	54.706	
3,900.0	3,811.9	3,814.8	3,810.3	15.2	7.3	166.61	168.3	72.4	803.0	788.4	14.62	54.938	
4,000.0	3,908.7	3,911.7	3,907.0	15.7	7.5	166.64	173.6	72.5	827.7	812.7	15.01	55.158	
4,100.0	4,005.5	4,008.6	4,003.8	16.2	7.7	166.66	178.9	72.6	852.3	836.9	15.39	55.367	
4,200.0	4,102.2	4,105.5	4,100.6	16.7	7.9	166.69	184.1	72.7	877.0	861.2	15.78	55.566	
4,300.0	4,199.0	4,202.4	4,197.3	17.2	8.0	166.71	189.4	72.7	901.6	885.4	16.17	55.754	
4,400.0	4,295.8	4,299.3	4,294.1	17.6	8.2	166.73	194.6	72.8	926.3	909.7	16.56	55.934	
4,500.0	4,392.6	4,396.3	4,390.9	18.1	8.4	166.76	199.9	72.9	950.9	934.0	16.95	56.106	
4,600.0	4,489.3	4,493.2	4,487.7	18.6	8.6	166.78	205.2	73.0	975.5	958.2	17.34	56.270	
4,700.0	4,586.1	4,590.1	4,584.4	19.1	8.8	166.80	210.4	73.0	1,000.2	982.5	17.73	56.426	
4,800.0	4,682.9	4,687.0	4,681.2	19.6	9.0	166.81	215.7	73.1	1,024.8	1,006.7	18.11	56.576	
4,900.0	4,779.6	4,783.9	4,778.0	20.1	9.2	166.83	220.9	73.2	1,049.5	1,031.0	18.50	56.719	
5,000.0	4,876.4	4,880.8	4,874.8	20.6	9.4	166.85	226.2	73.3	1,074.1	1,055.2	18.89	56.857	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1H-7H-A168 - HZ - Plan #2

Survey Program: 0-Geolink MWD

Offset Site Error: 0.0 ft

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,100.0	4,973.2	4,977.7	4,971.5	21.0	9.6	166.86	231.4	73.3	1,098.8	1,079.5	19.28	56.989	
5,200.0	5,070.0	5,074.7	5,068.3	21.5	9.8	166.88	236.7	73.4	1,123.4	1,103.7	19.67	57.115	
5,300.0	5,166.7	5,171.6	5,165.1	22.0	10.0	166.90	242.0	73.5	1,148.1	1,128.0	20.06	57.237	
5,400.0	5,263.5	5,268.5	5,261.8	22.5	10.2	166.91	247.2	73.6	1,172.7	1,152.3	20.45	57.354	
5,500.0	5,360.3	5,365.4	5,358.6	23.0	10.3	166.92	252.5	73.7	1,197.3	1,176.5	20.84	57.467	
5,600.0	5,457.0	5,462.3	5,455.4	23.5	10.5	166.94	257.7	73.7	1,222.0	1,200.8	21.22	57.575	
5,700.0	5,553.8	5,559.2	5,552.2	23.9	10.7	166.95	263.0	73.8	1,246.6	1,225.0	21.61	57.680	
5,800.0	5,650.6	5,656.2	5,648.9	24.4	10.9	166.96	268.3	73.9	1,271.3	1,249.3	22.00	57.780	
5,900.0	5,747.4	5,753.1	5,745.7	24.9	11.1	166.97	273.5	74.0	1,295.9	1,273.5	22.39	57.878	
6,000.0	5,844.1	5,850.0	5,842.5	25.4	11.3	166.98	278.8	74.0	1,320.6	1,297.8	22.78	57.972	
6,100.0	5,940.9	5,946.9	5,939.3	25.9	11.5	166.99	284.0	74.1	1,345.2	1,322.0	23.17	58.062	
6,200.0	6,037.7	6,043.8	6,036.0	26.4	11.7	167.00	289.3	74.2	1,369.9	1,346.3	23.56	58.150	
6,300.0	6,134.4	6,140.7	6,132.8	26.8	11.9	167.01	294.6	74.3	1,394.5	1,370.6	23.95	58.235	
6,400.0	6,231.2	6,237.6	6,229.6	27.3	12.1	167.02	299.8	74.3	1,419.2	1,394.8	24.34	58.317	
6,500.0	6,328.0	6,334.6	6,326.3	27.8	12.3	167.03	305.1	74.4	1,443.8	1,419.1	24.72	58.397	
6,600.0	6,424.8	6,431.5	6,423.1	28.3	12.5	167.04	310.3	74.5	1,468.4	1,443.3	25.11	58.474	
6,700.0	6,521.5	6,528.4	6,519.9	28.8	12.7	167.05	315.6	74.6	1,493.1	1,467.6	25.50	58.548	
6,800.0	6,618.3	6,625.3	6,616.7	29.3	12.8	167.06	320.8	74.6	1,517.7	1,491.8	25.89	58.621	
6,900.0	6,715.1	6,722.2	6,713.4	29.8	13.0	167.07	326.1	74.7	1,542.4	1,516.1	26.28	58.691	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1I-7H-A168 - HZ - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	90.26	-0.4	80.0	80.0				
100.0	100.0	99.0	99.0	0.2	0.2	90.26	-0.4	80.0	80.0	79.7	0.30	264.886	
200.0	200.0	199.0	199.0	0.3	0.3	90.26	-0.4	80.0	80.0	79.4	0.65	122.948	CC, ES
300.0	300.0	299.0	299.0	0.5	0.5	167.47	-0.4	80.0	80.9	79.9	1.00	80.890	
400.0	400.0	399.0	399.0	0.7	0.7	167.86	-0.4	80.0	83.4	82.1	1.35	61.863	
500.0	499.9	498.9	498.9	0.9	0.8	168.45	-0.4	80.0	87.7	86.0	1.70	51.671	
600.0	599.7	598.7	598.7	1.1	1.0	169.18	-0.4	80.0	93.7	91.7	2.05	45.800	
700.0	699.4	697.5	697.5	1.3	1.2	169.59	0.3	80.5	101.8	99.4	2.39	42.562	
800.0	798.9	796.0	796.0	1.5	1.4	169.32	2.5	81.8	112.5	109.8	2.74	41.061	
900.0	898.3	894.1	893.9	1.8	1.5	168.58	6.0	84.1	125.8	122.7	3.09	40.684	SF
1,000.0	997.4	991.6	991.3	2.0	1.7	167.52	10.9	87.2	141.7	138.2	3.45	41.068	
1,100.0	1,096.3	1,090.0	1,089.4	2.3	1.9	166.57	16.5	90.8	159.7	155.8	3.81	41.870	
1,200.0	1,194.9	1,188.0	1,187.2	2.7	2.1	165.93	22.1	94.4	179.3	175.2	4.18	42.911	
1,300.0	1,293.3	1,285.7	1,284.7	3.0	2.3	165.52	27.7	97.9	200.7	196.2	4.55	44.130	
1,400.0	1,391.2	1,383.0	1,381.8	3.4	2.5	165.30	33.3	101.5	223.7	218.8	4.92	45.489	
1,500.0	1,488.9	1,479.9	1,478.5	3.8	2.7	165.21	38.8	105.0	248.4	243.1	5.29	46.959	
1,600.0	1,586.1	1,576.4	1,574.7	4.3	2.9	165.21	44.3	108.5	274.6	269.0	5.66	48.520	
1,659.9	1,644.1	1,634.0	1,632.2	4.5	3.0	165.25	47.6	110.6	291.2	285.3	5.88	49.494	
1,700.0	1,683.0	1,672.5	1,670.6	4.7	3.1	165.31	49.8	112.0	302.4	296.4	6.04	50.099	
1,800.0	1,779.7	1,768.4	1,766.3	5.2	3.3	165.44	55.3	115.5	330.5	324.1	6.42	51.477	
1,900.0	1,876.5	1,864.4	1,862.1	5.6	3.5	165.55	60.8	119.0	358.5	351.7	6.80	52.693	
2,000.0	1,973.3	1,960.4	1,957.9	6.1	3.7	165.65	66.3	122.5	386.6	379.4	7.19	53.773	
2,100.0	2,070.0	2,056.4	2,053.6	6.6	3.9	165.73	71.8	125.9	414.7	407.1	7.58	54.739	
2,200.0	2,166.8	2,152.3	2,149.4	7.1	4.1	165.80	77.3	129.4	442.8	434.8	7.96	55.608	
2,300.0	2,263.6	2,248.3	2,245.1	7.5	4.3	165.86	82.7	132.9	470.8	462.5	8.35	56.394	
2,400.0	2,360.4	2,344.3	2,340.9	8.0	4.5	165.92	88.2	136.4	498.9	490.2	8.74	57.107	
2,500.0	2,457.1	2,440.3	2,436.7	8.5	4.7	165.97	93.7	139.9	527.0	517.9	9.12	57.758	
2,600.0	2,553.9	2,536.3	2,532.4	9.0	4.9	166.01	99.2	143.4	555.1	545.5	9.51	58.354	
2,700.0	2,650.7	2,632.2	2,628.2	9.4	5.1	166.06	104.7	146.9	583.1	573.2	9.90	58.902	
2,800.0	2,747.4	2,728.2	2,723.9	9.9	5.3	166.09	110.2	150.4	611.2	600.9	10.29	59.408	
2,900.0	2,844.2	2,824.2	2,819.7	10.4	5.5	166.13	115.6	153.9	639.3	628.6	10.68	59.875	
3,000.0	2,941.0	2,920.2	2,915.4	10.9	5.7	166.16	121.1	157.4	667.3	656.3	11.07	60.309	
3,100.0	3,037.8	3,016.1	3,011.2	11.4	5.9	166.18	126.6	160.9	695.4	684.0	11.45	60.712	
3,200.0	3,134.5	3,112.1	3,107.0	11.9	6.1	166.21	132.1	164.3	723.5	711.6	11.84	61.088	
3,300.0	3,231.3	3,208.1	3,202.7	12.3	6.3	166.24	137.6	167.8	751.6	739.3	12.23	61.440	
3,400.0	3,328.1	3,304.1	3,298.5	12.8	6.5	166.26	143.1	171.3	779.6	767.0	12.62	61.769	
3,500.0	3,424.8	3,400.1	3,394.2	13.3	6.7	166.28	148.6	174.8	807.7	794.7	13.01	62.078	
3,600.0	3,521.6	3,496.0	3,490.0	13.8	6.9	166.30	154.0	178.3	835.8	822.4	13.40	62.369	
3,700.0	3,618.4	3,592.0	3,585.7	14.3	7.1	166.32	159.5	181.8	863.9	850.1	13.79	62.643	
3,800.0	3,715.2	3,688.0	3,681.5	14.7	7.3	166.33	165.0	185.3	891.9	877.8	14.18	62.901	
3,900.0	3,811.9	3,784.0	3,777.3	15.2	7.5	166.35	170.5	188.8	920.0	905.4	14.57	63.145	
4,000.0	3,908.7	3,879.9	3,873.0	15.7	7.7	166.36	176.0	192.3	948.1	933.1	14.96	63.377	
4,100.0	4,005.5	3,975.9	3,968.8	16.2	7.9	166.38	181.5	195.8	976.2	960.8	15.35	63.596	
4,200.0	4,102.2	4,071.9	4,064.5	16.7	8.1	166.39	186.9	199.2	1,004.2	988.5	15.74	63.804	
4,300.0	4,199.0	4,167.9	4,160.3	17.2	8.3	166.40	192.4	202.7	1,032.3	1,016.2	16.13	64.002	
4,400.0	4,295.8	4,263.9	4,256.0	17.6	8.5	166.42	197.9	206.2	1,060.4	1,043.9	16.52	64.190	
4,500.0	4,392.6	4,359.8	4,351.8	18.1	8.7	166.43	203.4	209.7	1,088.5	1,071.6	16.91	64.370	
4,600.0	4,489.3	4,455.8	4,447.6	18.6	8.9	166.44	208.9	213.2	1,116.5	1,099.2	17.30	64.541	
4,700.0	4,586.1	4,551.8	4,543.3	19.1	9.1	166.45	214.4	216.7	1,144.6	1,126.9	17.69	64.704	
4,800.0	4,682.9	4,647.8	4,639.1	19.6	9.3	166.46	219.9	220.2	1,172.7	1,154.6	18.08	64.861	
4,900.0	4,779.6	4,743.8	4,734.8	20.1	9.5	166.47	225.3	223.7	1,200.8	1,182.3	18.47	65.010	
5,000.0	4,876.4	4,839.7	4,830.6	20.6	9.7	166.48	230.8	227.2	1,228.8	1,210.0	18.86	65.153	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1I-7H-A168 - HZ - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,100.0	4,973.2	4,935.7	4,926.3	21.0	9.9	166.49	236.3	230.7	1,256.9	1,237.7	19.25	65.291	
5,200.0	5,070.0	5,031.7	5,022.1	21.5	10.1	166.49	241.8	234.2	1,285.0	1,265.4	19.64	65.423	
5,300.0	5,166.7	5,127.7	5,117.9	22.0	10.3	166.50	247.3	237.6	1,313.1	1,293.0	20.03	65.549	
5,400.0	5,263.5	5,223.6	5,213.6	22.5	10.5	166.51	252.8	241.1	1,341.1	1,320.7	20.42	65.671	
5,500.0	5,360.3	5,319.6	5,309.4	23.0	10.7	166.52	258.2	244.6	1,369.2	1,348.4	20.81	65.788	
5,600.0	5,457.0	5,415.6	5,405.1	23.5	10.9	166.52	263.7	248.1	1,397.3	1,376.1	21.20	65.900	
5,700.0	5,553.8	5,511.6	5,500.9	23.9	11.1	166.53	269.2	251.6	1,425.4	1,403.8	21.59	66.009	
5,800.0	5,650.6	5,607.6	5,596.6	24.4	11.3	166.54	274.7	255.1	1,453.4	1,431.5	21.98	66.113	
5,900.0	5,747.4	5,703.5	5,692.4	24.9	11.5	166.54	280.2	258.6	1,481.5	1,459.1	22.37	66.214	
6,000.0	5,844.1	5,799.5	5,788.2	25.4	11.7	166.55	285.7	262.1	1,509.6	1,486.8	22.77	66.312	
6,100.0	5,940.9	5,895.5	5,883.9	25.9	11.9	166.55	291.2	265.6	1,537.7	1,514.5	23.16	66.406	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Sosa 21-18 - DD (MWD) - DD

Offset Site Error: 0.0 ft

Survey Program: 814-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
12,100.0	7,530.0	7,672.3	7,529.2	84.1	25.2	90.33	-5,481.1	-2,587.1	1,473.8	1,377.4	96.44	15.283	
12,200.0	7,530.0	7,670.4	7,527.3	85.7	25.2	90.20	-5,481.1	-2,587.1	1,396.7	1,298.5	98.16	14.228	
12,300.0	7,530.0	7,668.4	7,525.3	87.3	25.2	90.08	-5,481.2	-2,587.1	1,322.6	1,222.7	99.89	13.240	
12,400.0	7,530.0	7,666.5	7,523.4	89.0	25.2	89.96	-5,481.2	-2,587.0	1,252.1	1,150.5	101.62	12.322	
12,500.0	7,530.0	7,664.5	7,521.4	90.6	25.2	89.84	-5,481.3	-2,587.0	1,185.9	1,082.5	103.35	11.475	
12,600.0	7,530.0	7,662.6	7,519.5	92.2	25.2	89.71	-5,481.3	-2,586.9	1,124.7	1,019.6	105.07	10.703	
12,700.0	7,530.0	7,660.6	7,517.5	93.9	25.2	89.59	-5,481.3	-2,586.9	1,069.3	962.5	106.80	10.012	
12,800.0	7,530.0	7,658.7	7,515.6	95.5	25.2	89.47	-5,481.4	-2,586.9	1,020.7	912.2	108.53	9.405	
12,900.0	7,530.0	7,656.8	7,513.7	97.2	25.2	89.35	-5,481.4	-2,586.8	980.0	869.7	110.26	8.888	
13,000.0	7,530.0	7,654.8	7,511.7	98.8	25.2	89.23	-5,481.4	-2,586.8	948.1	836.1	111.99	8.466	
13,100.0	7,530.0	7,652.9	7,509.8	100.5	25.2	89.11	-5,481.5	-2,586.8	925.9	812.2	113.72	8.142	
13,200.0	7,530.0	7,651.0	7,507.9	102.1	25.2	88.99	-5,481.5	-2,586.7	914.2	798.7	115.45	7.919	
13,257.7	7,530.0	7,649.8	7,506.7	103.1	25.2	88.92	-5,481.5	-2,586.7	912.4	795.9	116.45	7.835	CC, ES
13,300.0	7,530.0	7,649.0	7,505.9	103.8	25.2	88.86	-5,481.6	-2,586.7	913.3	796.2	117.18	7.795	
13,400.0	7,530.0	7,647.1	7,504.0	105.5	25.2	88.74	-5,481.6	-2,586.7	923.4	804.5	118.91	7.766	SF
13,500.0	7,530.0	7,645.2	7,502.1	107.1	25.2	88.62	-5,481.6	-2,586.6	944.0	823.3	120.64	7.825	
13,600.0	7,530.0	7,643.3	7,500.2	108.8	25.2	88.50	-5,481.7	-2,586.6	974.4	852.1	122.37	7.963	
13,700.0	7,530.0	7,641.3	7,498.2	110.5	25.2	88.38	-5,481.7	-2,586.5	1,013.9	889.8	124.09	8.170	
13,800.0	7,530.0	7,639.4	7,496.3	112.2	25.2	88.26	-5,481.7	-2,586.5	1,061.3	935.5	125.82	8.435	
13,900.0	7,530.0	7,637.5	7,494.4	113.9	25.2	88.14	-5,481.8	-2,586.5	1,115.7	988.2	127.55	8.747	
14,000.0	7,530.0	7,635.6	7,492.5	115.5	25.2	88.02	-5,481.8	-2,586.4	1,176.1	1,046.8	129.28	9.097	
14,100.0	7,530.0	7,633.7	7,490.6	117.2	25.2	87.90	-5,481.9	-2,586.4	1,241.6	1,110.6	131.00	9.478	
14,200.0	7,530.0	7,631.8	7,488.7	118.9	25.2	87.78	-5,481.9	-2,586.4	1,311.5	1,178.7	132.73	9.881	
14,300.0	7,530.0	7,629.9	7,486.8	120.6	25.2	87.66	-5,481.9	-2,586.3	1,385.0	1,250.6	134.46	10.301	
14,400.0	7,530.0	7,628.0	7,484.9	122.3	25.2	87.54	-5,482.0	-2,586.3	1,461.8	1,325.6	136.18	10.734	
14,500.0	7,530.0	7,626.1	7,483.0	124.0	25.2	87.42	-5,482.0	-2,586.3	1,541.1	1,403.2	137.91	11.175	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Sosa 22-18 - DD - DD

Offset Site Error: 0.0 ft

Survey Program: 41-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
13,600.0	7,530.0	7,664.1	7,528.3	108.8	25.4	90.25	-6,969.7	-2,669.7	1,517.7	1,393.2	124.56	12.184	
13,700.0	7,530.0	7,664.6	7,528.7	110.5	25.4	90.27	-6,969.7	-2,669.7	1,443.7	1,317.4	126.30	11.431	
13,800.0	7,530.0	7,665.0	7,529.2	112.2	25.4	90.30	-6,969.7	-2,669.7	1,373.0	1,245.0	128.04	10.723	
13,900.0	7,530.0	7,665.5	7,529.6	113.9	25.4	90.32	-6,969.7	-2,669.7	1,306.1	1,176.3	129.79	10.064	
14,000.0	7,530.0	7,665.9	7,530.1	115.5	25.4	90.35	-6,969.7	-2,669.7	1,243.7	1,112.2	131.53	9.456	
14,100.0	7,530.0	7,666.4	7,530.5	117.2	25.4	90.37	-6,969.7	-2,669.7	1,186.4	1,053.2	133.27	8.903	
14,200.0	7,530.0	7,666.8	7,531.0	118.9	25.4	90.40	-6,969.7	-2,669.7	1,135.1	1,000.1	135.01	8.407	
14,300.0	7,530.0	7,667.2	7,531.4	120.6	25.4	90.43	-6,969.7	-2,669.7	1,090.5	953.8	136.75	7.974	
14,400.0	7,530.0	7,667.7	7,531.9	122.3	25.4	90.45	-6,969.7	-2,669.7	1,053.6	915.1	138.50	7.607	
14,500.0	7,530.0	7,668.1	7,532.3	124.0	25.4	90.48	-6,969.7	-2,669.7	1,025.1	884.9	140.24	7.310	
14,600.0	7,530.0	7,668.6	7,532.7	125.7	25.4	90.50	-6,969.7	-2,669.7	1,005.8	863.9	141.98	7.084	
14,700.0	7,530.0	7,669.0	7,533.2	127.4	25.4	90.53	-6,969.7	-2,669.6	996.3	852.5	143.73	6.932	
14,745.9	7,530.0	7,669.2	7,533.4	128.1	25.4	90.54	-6,969.7	-2,669.6	995.2	850.7	144.53	6.886	CC, ES
14,800.0	7,530.0	7,669.4	7,533.6	129.1	25.4	90.55	-6,969.7	-2,669.6	996.7	851.2	145.47	6.851	
14,900.0	7,530.0	7,669.9	7,534.0	130.8	25.4	90.58	-6,969.7	-2,669.6	1,007.1	859.8	147.22	6.841	SF
15,000.0	7,530.0	7,670.3	7,534.5	132.5	25.4	90.60	-6,969.7	-2,669.6	1,027.1	878.2	148.96	6.895	
15,100.0	7,530.0	7,670.7	7,534.9	134.2	25.4	90.63	-6,969.7	-2,669.6	1,056.3	905.6	150.71	7.009	
15,200.0	7,530.0	7,671.2	7,535.3	135.9	25.4	90.65	-6,969.8	-2,669.6	1,093.9	941.4	152.45	7.175	
15,300.0	7,530.0	7,671.6	7,535.7	137.6	25.4	90.68	-6,969.8	-2,669.6	1,139.0	984.8	154.20	7.387	
15,400.0	7,530.0	7,672.0	7,536.2	139.3	25.4	90.70	-6,969.8	-2,669.6	1,190.9	1,035.0	155.94	7.637	
15,500.0	7,530.0	7,672.4	7,536.6	141.0	25.4	90.72	-6,969.8	-2,669.6	1,248.6	1,090.9	157.69	7.918	
15,600.0	7,530.0	7,672.9	7,537.0	142.7	25.4	90.75	-6,969.8	-2,669.6	1,311.4	1,152.0	159.43	8.226	
15,700.0	7,530.0	7,673.3	7,537.4	144.4	25.4	90.77	-6,969.8	-2,669.6	1,378.6	1,217.5	161.18	8.554	
15,800.0	7,530.0	7,673.7	7,537.9	146.1	25.4	90.80	-6,969.8	-2,669.6	1,449.6	1,286.7	162.92	8.898	
15,900.0	7,530.0	7,674.1	7,538.3	147.8	25.4	90.82	-6,969.8	-2,669.6	1,523.9	1,359.2	164.67	9.254	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - THOMAS 24-7 (EXISTING) - ENCANA WELL - Plan

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
11,000.0	7,530.0	7,523.9	7,512.0	66.7	14.1	90.00	-4,312.2	-2,695.5	1,492.3	1,419.2	73.11	20.411	
11,100.0	7,530.0	7,523.9	7,512.0	68.3	14.1	90.00	-4,312.2	-2,695.5	1,421.1	1,346.2	74.83	18.991	
11,200.0	7,530.0	7,523.9	7,512.0	69.8	14.1	90.00	-4,312.2	-2,695.5	1,353.4	1,276.9	76.54	17.682	
11,300.0	7,530.0	7,523.9	7,512.0	71.4	14.1	90.00	-4,312.2	-2,695.5	1,290.0	1,211.7	78.26	16.484	
11,400.0	7,530.0	7,523.9	7,512.0	72.9	14.1	90.00	-4,312.2	-2,695.5	1,231.4	1,151.4	79.97	15.398	
11,500.0	7,530.0	7,523.9	7,512.0	74.5	14.1	90.00	-4,312.2	-2,695.5	1,178.4	1,096.7	81.69	14.425	
11,600.0	7,530.0	7,523.9	7,512.0	76.1	14.1	90.00	-4,312.2	-2,695.5	1,131.8	1,048.4	83.41	13.569	
11,700.0	7,530.0	7,523.9	7,512.0	77.7	14.1	90.00	-4,312.2	-2,695.5	1,092.4	1,007.3	85.14	12.831	
11,800.0	7,530.0	7,523.9	7,512.0	79.3	14.1	90.00	-4,312.2	-2,695.5	1,061.0	974.1	86.86	12.214	
11,900.0	7,530.0	7,523.9	7,512.0	80.9	14.1	90.00	-4,312.2	-2,695.5	1,038.3	949.7	88.59	11.720	
12,000.0	7,530.0	7,523.9	7,512.0	82.5	14.1	90.00	-4,312.2	-2,695.5	1,024.8	934.5	90.31	11.347	
12,088.4	7,530.0	7,523.9	7,512.0	83.9	14.1	90.00	-4,312.2	-2,695.5	1,021.0	929.2	91.84	11.117	CC
12,100.0	7,530.0	7,523.9	7,512.0	84.1	14.1	90.00	-4,312.2	-2,695.5	1,021.1	929.0	92.04	11.094	ES
12,200.0	7,530.0	7,523.9	7,512.0	85.7	14.1	90.00	-4,312.2	-2,695.5	1,027.1	933.3	93.77	10.953	
12,300.0	7,530.0	7,523.9	7,512.0	87.3	14.1	90.00	-4,312.2	-2,695.5	1,042.7	947.2	95.50	10.918	SF
12,400.0	7,530.0	7,523.9	7,512.0	89.0	14.1	90.00	-4,312.2	-2,695.5	1,067.5	970.3	97.23	10.979	
12,500.0	7,530.0	7,523.9	7,512.0	90.6	14.1	90.00	-4,312.2	-2,695.5	1,100.9	1,001.9	98.97	11.124	
12,600.0	7,530.0	7,523.9	7,512.0	92.2	14.1	90.00	-4,312.2	-2,695.5	1,142.0	1,041.3	100.70	11.341	
12,700.0	7,530.0	7,523.9	7,512.0	93.9	14.1	90.00	-4,312.2	-2,695.5	1,190.2	1,087.8	102.43	11.619	
12,800.0	7,530.0	7,523.9	7,512.0	95.5	14.1	90.00	-4,312.2	-2,695.5	1,244.5	1,140.4	104.17	11.947	
12,900.0	7,530.0	7,523.9	7,512.0	97.2	14.1	90.00	-4,312.2	-2,695.5	1,304.3	1,198.4	105.90	12.316	
13,000.0	7,530.0	7,523.9	7,512.0	98.8	14.1	90.00	-4,312.2	-2,695.5	1,368.8	1,261.1	107.64	12.716	
13,100.0	7,530.0	7,523.9	7,512.0	100.5	14.1	90.00	-4,312.2	-2,695.5	1,437.3	1,327.9	109.38	13.141	
13,200.0	7,530.0	7,523.9	7,512.0	102.1	14.1	90.00	-4,312.2	-2,695.5	1,509.4	1,398.3	111.11	13.584	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - THOMAS 24-7 (EXISTING) - ENCANA WELL - Plan

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
11,000.0	7,530.0	7,523.9	7,512.0	66.7	14.1	90.00	-4,312.2	-2,695.5	1,492.3	1,419.2	73.11	20.411	
11,100.0	7,530.0	7,523.9	7,512.0	68.3	14.1	90.00	-4,312.2	-2,695.5	1,421.1	1,346.2	74.83	18.991	
11,200.0	7,530.0	7,523.9	7,512.0	69.8	14.1	90.00	-4,312.2	-2,695.5	1,353.4	1,276.9	76.54	17.682	
11,300.0	7,530.0	7,523.9	7,512.0	71.4	14.1	90.00	-4,312.2	-2,695.5	1,290.0	1,211.7	78.26	16.484	
11,400.0	7,530.0	7,523.9	7,512.0	72.9	14.1	90.00	-4,312.2	-2,695.5	1,231.4	1,151.4	79.97	15.398	
11,500.0	7,530.0	7,523.9	7,512.0	74.5	14.1	90.00	-4,312.2	-2,695.5	1,178.4	1,096.7	81.69	14.425	
11,600.0	7,530.0	7,523.9	7,512.0	76.1	14.1	90.00	-4,312.2	-2,695.5	1,131.8	1,048.4	83.41	13.569	
11,700.0	7,530.0	7,523.9	7,512.0	77.7	14.1	90.00	-4,312.2	-2,695.5	1,092.4	1,007.3	85.14	12.831	
11,800.0	7,530.0	7,523.9	7,512.0	79.3	14.1	90.00	-4,312.2	-2,695.5	1,061.0	974.1	86.86	12.214	
11,900.0	7,530.0	7,523.9	7,512.0	80.9	14.1	90.00	-4,312.2	-2,695.5	1,038.3	949.7	88.59	11.720	
12,000.0	7,530.0	7,523.9	7,512.0	82.5	14.1	90.00	-4,312.2	-2,695.5	1,024.8	934.5	90.31	11.347	
12,088.4	7,530.0	7,523.9	7,512.0	83.9	14.1	90.00	-4,312.2	-2,695.5	1,021.0	929.2	91.84	11.117	CC
12,100.0	7,530.0	7,523.9	7,512.0	84.1	14.1	90.00	-4,312.2	-2,695.5	1,021.1	929.0	92.04	11.094	ES
12,200.0	7,530.0	7,523.9	7,512.0	85.7	14.1	90.00	-4,312.2	-2,695.5	1,027.1	933.3	93.77	10.953	
12,300.0	7,530.0	7,523.9	7,512.0	87.3	14.1	90.00	-4,312.2	-2,695.5	1,042.7	947.2	95.50	10.918	SF
12,400.0	7,530.0	7,523.9	7,512.0	89.0	14.1	90.00	-4,312.2	-2,695.5	1,067.5	970.3	97.23	10.979	
12,500.0	7,530.0	7,523.9	7,512.0	90.6	14.1	90.00	-4,312.2	-2,695.5	1,100.9	1,001.9	98.97	11.124	
12,600.0	7,530.0	7,523.9	7,512.0	92.2	14.1	90.00	-4,312.2	-2,695.5	1,142.0	1,041.3	100.70	11.341	
12,700.0	7,530.0	7,523.9	7,512.0	93.9	14.1	90.00	-4,312.2	-2,695.5	1,190.2	1,087.8	102.43	11.619	
12,800.0	7,530.0	7,523.9	7,512.0	95.5	14.1	90.00	-4,312.2	-2,695.5	1,244.5	1,140.4	104.17	11.947	
12,900.0	7,530.0	7,523.9	7,512.0	97.2	14.1	90.00	-4,312.2	-2,695.5	1,304.3	1,198.4	105.90	12.316	
13,000.0	7,530.0	7,523.9	7,512.0	98.8	14.1	90.00	-4,312.2	-2,695.5	1,368.8	1,261.1	107.64	12.716	
13,100.0	7,530.0	7,523.9	7,512.0	100.5	14.1	90.00	-4,312.2	-2,695.5	1,437.3	1,327.9	109.38	13.141	
13,200.0	7,530.0	7,523.9	7,512.0	102.1	14.1	90.00	-4,312.2	-2,695.5	1,509.4	1,398.3	111.11	13.584	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - THOMAS 24-7 (EXISTING) - ENCANA WELL - SUR

Offset Site Error: 0.0 ft

Survey Program: 1024-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
11,000.0	7,530.0	7,534.3	7,521.7	66.7	14.0	90.54	-4,304.8	-2,700.5	1,490.5	1,417.4	73.09	20.392	
11,100.0	7,530.0	7,533.6	7,521.1	68.3	14.0	90.51	-4,304.8	-2,700.6	1,419.6	1,344.8	74.80	18.979	
11,200.0	7,530.0	7,533.0	7,520.5	69.8	14.0	90.47	-4,304.8	-2,700.6	1,352.4	1,275.9	76.51	17.676	
11,300.0	7,530.0	7,532.4	7,519.9	71.4	14.0	90.44	-4,304.8	-2,700.6	1,289.5	1,211.3	78.23	16.484	
11,400.0	7,530.0	7,531.8	7,519.3	72.9	14.0	90.40	-4,304.8	-2,700.6	1,231.5	1,151.6	79.95	15.405	
11,500.0	7,530.0	7,531.2	7,518.6	74.5	14.0	90.37	-4,304.9	-2,700.6	1,179.2	1,097.5	81.66	14.439	
11,600.0	7,530.0	7,530.5	7,518.0	76.1	14.0	90.33	-4,304.9	-2,700.6	1,133.2	1,049.9	83.38	13.591	
11,700.0	7,530.0	7,529.9	7,517.4	77.7	14.0	90.30	-4,304.9	-2,700.6	1,094.5	1,009.4	85.11	12.861	
11,800.0	7,530.0	7,529.3	7,516.7	79.3	14.0	90.26	-4,304.9	-2,700.6	1,063.9	977.0	86.83	12.252	
11,900.0	7,530.0	7,528.6	7,516.1	80.9	14.0	90.23	-4,304.9	-2,700.6	1,041.9	953.4	88.56	11.766	
12,000.0	7,530.0	7,528.0	7,515.4	82.5	14.0	90.19	-4,304.9	-2,700.6	1,029.3	939.0	90.28	11.401	
12,081.1	7,530.0	7,527.4	7,514.9	83.8	14.0	90.16	-4,304.9	-2,700.6	1,026.1	934.4	91.68	11.192	CC
12,100.0	7,530.0	7,527.3	7,514.8	84.1	14.0	90.16	-4,304.9	-2,700.6	1,026.3	934.2	92.01	11.154	ES
12,200.0	7,530.0	7,526.7	7,514.2	85.7	14.0	90.12	-4,304.9	-2,700.6	1,032.9	939.2	93.74	11.020	
12,300.0	7,530.0	7,526.0	7,513.5	87.3	14.0	90.08	-4,304.9	-2,700.6	1,049.2	953.7	95.47	10.990	SF
12,400.0	7,530.0	7,525.4	7,512.8	89.0	14.0	90.05	-4,304.9	-2,700.6	1,074.5	977.3	97.20	11.055	
12,500.0	7,530.0	7,524.7	7,512.2	90.6	14.0	90.01	-4,304.9	-2,700.6	1,108.3	1,009.4	98.93	11.203	
12,600.0	7,530.0	7,524.0	7,511.5	92.2	14.0	89.97	-4,304.9	-2,700.6	1,149.8	1,049.2	100.66	11.423	
12,700.0	7,530.0	7,523.4	7,510.8	93.9	14.0	89.94	-4,304.9	-2,700.6	1,198.3	1,095.9	102.39	11.703	
12,800.0	7,530.0	7,522.7	7,510.2	95.5	14.0	89.90	-4,304.9	-2,700.6	1,252.9	1,148.7	104.13	12.032	
12,900.0	7,530.0	7,522.0	7,509.5	97.2	14.0	89.86	-4,304.9	-2,700.6	1,312.8	1,207.0	105.86	12.401	
13,000.0	7,530.0	7,521.3	7,508.8	98.8	14.0	89.82	-4,304.9	-2,700.6	1,377.4	1,269.8	107.60	12.802	
13,100.0	7,530.0	7,520.7	7,508.1	100.5	14.0	89.78	-4,304.9	-2,700.6	1,446.0	1,336.7	109.33	13.226	
13,200.0	7,530.0	7,520.0	7,507.5	102.1	14.0	89.75	-4,304.9	-2,700.6	1,518.2	1,407.1	111.07	13.669	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - THOMAS 24-7 (Existing) - Existing - NO SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 8365-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
11,100.0	7,530.0	7,496.0	7,496.0	68.3	13.1	90.00	-4,174.4	-2,953.8	1,536.3	1,461.7	74.59	20.598	
11,200.0	7,530.0	7,496.0	7,496.0	69.8	13.1	90.00	-4,174.4	-2,953.8	1,483.3	1,407.0	76.30	19.440	
11,300.0	7,530.0	7,496.0	7,496.0	71.4	13.1	90.00	-4,174.4	-2,953.8	1,435.3	1,357.3	78.02	18.397	
11,400.0	7,530.0	7,496.0	7,496.0	72.9	13.1	90.00	-4,174.4	-2,953.8	1,392.8	1,313.1	79.73	17.468	
11,500.0	7,530.0	7,496.0	7,496.0	74.5	13.1	90.00	-4,174.4	-2,953.8	1,356.4	1,274.9	81.45	16.652	
11,600.0	7,530.0	7,496.0	7,496.0	76.1	13.1	90.00	-4,174.4	-2,953.8	1,326.5	1,243.3	83.17	15.949	
11,700.0	7,530.0	7,496.0	7,496.0	77.7	13.1	90.00	-4,174.4	-2,953.8	1,303.7	1,218.8	84.90	15.356	
11,800.0	7,530.0	7,496.0	7,496.0	79.3	13.1	90.00	-4,174.4	-2,953.8	1,288.2	1,201.6	86.62	14.871	
11,900.0	7,530.0	7,496.0	7,496.0	80.9	13.1	90.00	-4,174.4	-2,953.8	1,280.3	1,192.0	88.35	14.492	
11,950.6	7,530.0	7,496.0	7,496.0	81.7	13.1	90.00	-4,174.4	-2,953.8	1,279.3	1,190.1	89.22	14.339	CC, ES
12,000.0	7,530.0	7,496.0	7,496.0	82.5	13.1	90.00	-4,174.4	-2,953.8	1,280.3	1,190.2	90.08	14.214	
12,100.0	7,530.0	7,496.0	7,496.0	84.1	13.1	90.00	-4,174.4	-2,953.8	1,288.0	1,196.2	91.80	14.030	
12,200.0	7,530.0	7,496.0	7,496.0	85.7	13.1	90.00	-4,174.4	-2,953.8	1,303.4	1,209.9	93.53	13.936	
12,300.0	7,530.0	7,496.0	7,496.0	87.3	13.1	90.00	-4,174.4	-2,953.8	1,326.2	1,230.9	95.26	13.921	SF
12,400.0	7,530.0	7,496.0	7,496.0	89.0	13.1	90.00	-4,174.4	-2,953.8	1,356.0	1,259.0	96.99	13.980	
12,500.0	7,530.0	7,496.0	7,496.0	90.6	13.1	90.00	-4,174.4	-2,953.8	1,392.3	1,293.6	98.73	14.103	
12,600.0	7,530.0	7,496.0	7,496.0	92.2	13.1	90.00	-4,174.4	-2,953.8	1,434.7	1,334.3	100.46	14.282	
12,700.0	7,530.0	7,496.0	7,496.0	93.9	13.1	90.00	-4,174.4	-2,953.8	1,482.7	1,380.5	102.19	14.508	
12,800.0	7,530.0	7,496.0	7,496.0	95.5	13.1	90.00	-4,174.4	-2,953.8	1,535.6	1,431.7	103.93	14.776	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - THOMAS 33-7 (EXISTING) - ENCANA WELL - SUR

Offset Site Error: 0.0 ft

Survey Program: 59-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
9,300.0	7,530.0	7,779.4	7,508.1	43.3	34.7	-87.68	-3,010.1	-1,603.2	1,488.0	1,431.7	56.33	26.415	
9,400.0	7,530.0	7,779.6	7,508.3	44.5	34.7	-87.85	-3,010.1	-1,603.2	1,388.1	1,330.2	57.94	23.960	
9,500.0	7,530.0	7,779.8	7,508.5	45.7	34.7	-88.01	-3,010.1	-1,603.2	1,288.3	1,228.7	59.55	21.632	
9,600.0	7,530.0	7,780.0	7,508.7	46.9	34.7	-88.18	-3,010.1	-1,603.2	1,188.4	1,127.2	61.18	19.424	
9,700.0	7,530.0	7,780.2	7,508.9	48.2	34.7	-88.34	-3,010.1	-1,603.2	1,088.6	1,025.8	62.83	17.327	
9,800.0	7,530.0	7,780.5	7,509.1	49.5	34.7	-88.50	-3,010.1	-1,603.2	988.9	924.4	64.48	15.336	
9,900.0	7,530.0	7,780.7	7,509.3	50.8	34.7	-88.66	-3,010.1	-1,603.2	889.2	823.0	66.14	13.444	
10,000.0	7,530.0	7,780.9	7,509.5	52.2	34.7	-88.82	-3,010.1	-1,603.2	789.5	721.7	67.81	11.644	
10,100.0	7,530.0	7,781.0	7,509.7	53.5	34.7	-88.98	-3,010.1	-1,603.2	690.0	620.5	69.48	9.931	
10,200.0	7,530.0	7,781.2	7,509.9	54.9	34.7	-89.14	-3,010.1	-1,603.2	590.6	519.5	71.16	8.300	
10,300.0	7,530.0	7,781.4	7,510.1	56.3	34.7	-89.30	-3,010.1	-1,603.2	491.5	418.6	72.84	6.747	
10,400.0	7,530.0	7,781.6	7,510.3	57.8	34.7	-89.45	-3,010.1	-1,603.2	392.8	318.3	74.53	5.270	
10,500.0	7,530.0	7,781.8	7,510.5	59.2	34.7	-89.61	-3,010.1	-1,603.2	295.0	218.8	76.23	3.870	
10,600.0	7,530.0	7,782.0	7,510.7	60.7	34.7	-89.77	-3,010.1	-1,603.2	199.5	121.5	77.92	2.560	
10,700.0	7,530.0	7,782.2	7,510.9	62.2	34.7	-89.92	-3,010.1	-1,603.2	111.9	32.3	79.62	1.405	Level 3
10,786.3	7,530.0	7,782.4	7,511.1	63.5	34.7	-90.06	-3,010.1	-1,603.3	71.2	-9.8	81.09	0.879	Level 1, CC, ES, SF
10,800.0	7,530.0	7,782.4	7,511.1	63.7	34.7	-90.08	-3,010.1	-1,603.3	72.6	-8.8	81.32	0.892	Level 1
10,900.0	7,530.0	7,782.6	7,511.3	65.2	34.7	-90.23	-3,010.1	-1,603.3	134.2	51.1	83.03	1.616	
11,000.0	7,530.0	7,782.8	7,511.5	66.7	34.7	-90.38	-3,010.1	-1,603.3	225.3	140.5	84.74	2.658	
11,100.0	7,530.0	7,783.0	7,511.7	68.3	34.7	-90.53	-3,010.1	-1,603.3	321.7	235.2	86.44	3.721	
11,200.0	7,530.0	7,783.2	7,511.9	69.8	34.7	-90.69	-3,010.1	-1,603.3	419.8	331.6	88.16	4.762	
11,300.0	7,530.0	7,783.4	7,512.1	71.4	34.7	-90.84	-3,010.1	-1,603.3	518.6	428.8	89.87	5.771	
11,400.0	7,530.0	7,783.5	7,512.2	72.9	34.7	-90.99	-3,010.1	-1,603.3	617.8	526.2	91.58	6.746	
11,500.0	7,530.0	7,783.7	7,512.4	74.5	34.7	-91.14	-3,010.1	-1,603.3	717.2	624.0	93.29	7.688	
11,600.0	7,530.0	7,783.9	7,512.6	76.1	34.7	-91.28	-3,010.1	-1,603.3	816.8	721.8	95.01	8.597	
11,700.0	7,530.0	7,784.1	7,512.8	77.7	34.7	-91.43	-3,010.1	-1,603.3	916.5	819.7	96.73	9.475	
11,800.0	7,530.0	7,784.3	7,513.0	79.3	34.7	-91.58	-3,010.1	-1,603.3	1,016.2	917.8	98.44	10.323	
11,900.0	7,530.0	7,784.5	7,513.2	80.9	34.7	-91.72	-3,010.1	-1,603.3	1,116.0	1,015.8	100.16	11.142	
12,000.0	7,530.0	7,784.6	7,513.3	82.5	34.7	-91.87	-3,010.1	-1,603.3	1,215.8	1,113.9	101.88	11.934	
12,100.0	7,530.0	7,784.8	7,513.5	84.1	34.7	-92.01	-3,010.1	-1,603.3	1,315.6	1,212.0	103.59	12.700	
12,200.0	7,530.0	7,785.0	7,513.7	85.7	34.7	-92.16	-3,010.1	-1,603.3	1,415.5	1,310.2	105.31	13.441	
12,300.0	7,530.0	7,785.2	7,513.9	87.3	34.7	-92.30	-3,010.1	-1,603.3	1,515.4	1,408.3	107.03	14.158	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - THOMAS E UNIT 1 (EXISTING) - Existing - NO SUR

Offset Site Error: 0.0 ft

Survey Program: 8332-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
10,600.0	7,530.0	7,495.0	7,495.0	60.7	13.1	90.00	-3,068.8	-3,201.4	1,546.5	1,480.4	66.06	23.411	
10,700.0	7,530.0	7,495.0	7,495.0	62.2	13.1	90.00	-3,068.8	-3,201.4	1,533.8	1,466.0	67.76	22.637	
10,800.0	7,530.0	7,495.0	7,495.0	63.7	13.1	90.00	-3,068.8	-3,201.4	1,527.6	1,458.1	69.46	21.993	
10,845.0	7,530.0	7,495.0	7,495.0	64.4	13.1	90.00	-3,068.8	-3,201.4	1,526.9	1,456.7	70.23	21.743	CC, ES
10,900.0	7,530.0	7,495.0	7,495.0	65.2	13.1	90.00	-3,068.8	-3,201.4	1,527.9	1,456.7	71.16	21.470	
11,000.0	7,530.0	7,495.0	7,495.0	66.7	13.1	90.00	-3,068.8	-3,201.4	1,534.8	1,461.9	72.87	21.061	
11,100.0	7,530.0	7,495.0	7,495.0	68.3	13.1	90.00	-3,068.8	-3,201.4	1,548.1	1,473.5	74.58	20.756	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - WOOLLEY 21-7 (EXISTING) - ENCANA WELL - GY

Offset Site Error: 0.0 ft

Survey Program: 100-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
7,150.0	6,956.6	7,025.5	7,023.9	30.9	12.3	12.54	-288.8	-2,934.7	1,537.4	1,505.6	31.72	48.462	
7,200.0	7,004.0	7,079.0	7,077.4	31.1	12.4	23.38	-286.4	-2,933.8	1,520.6	1,489.5	31.08	48.919	
7,250.0	7,050.6	7,133.3	7,131.6	31.2	12.5	32.27	-283.7	-2,932.8	1,502.5	1,472.2	30.32	49.556	
7,300.0	7,096.1	7,187.0	7,185.2	31.4	12.6	39.78	-280.6	-2,931.5	1,483.3	1,453.8	29.47	50.328	
7,350.0	7,140.4	7,242.2	7,240.3	31.6	12.7	46.40	-277.1	-2,930.0	1,462.9	1,434.3	28.59	51.168	
7,400.0	7,183.1	7,295.8	7,293.7	31.7	12.8	52.42	-273.3	-2,928.1	1,441.7	1,414.0	27.75	51.947	
7,450.0	7,224.2	7,332.7	7,330.5	31.8	12.9	57.65	-270.8	-2,926.6	1,420.1	1,393.0	27.07	52.458	
7,500.0	7,263.4	7,366.8	7,364.5	32.0	12.9	62.44	-268.6	-2,925.2	1,398.5	1,371.9	26.56	52.646	
7,550.0	7,300.5	7,400.0	7,397.6	32.1	13.0	66.92	-266.7	-2,923.9	1,377.2	1,351.0	26.26	52.439	
7,600.0	7,335.4	7,430.9	7,428.4	32.2	13.0	71.06	-265.0	-2,922.6	1,356.5	1,330.4	26.17	51.827	
7,650.0	7,367.8	7,460.5	7,458.0	32.4	13.1	74.93	-263.6	-2,921.4	1,336.7	1,310.4	26.27	50.877	
7,700.0	7,397.6	7,487.9	7,485.4	32.5	13.1	78.46	-262.5	-2,920.2	1,318.1	1,291.5	26.51	49.717	
7,750.0	7,424.7	7,511.5	7,508.9	32.6	13.2	81.60	-261.6	-2,919.2	1,300.9	1,274.0	26.82	48.498	
7,800.0	7,448.9	7,531.3	7,528.7	32.8	13.2	84.32	-260.8	-2,918.4	1,285.5	1,258.3	27.16	47.335	
7,850.0	7,470.1	7,548.7	7,546.1	32.9	13.2	86.65	-260.3	-2,917.7	1,272.1	1,244.6	27.48	46.293	
7,900.0	7,488.2	7,563.5	7,560.9	33.1	13.3	88.59	-259.8	-2,917.1	1,261.1	1,233.4	27.77	45.409	
7,950.0	7,503.2	7,575.7	7,573.0	33.2	13.3	90.11	-259.5	-2,916.6	1,252.7	1,224.7	28.03	44.692	
8,000.0	7,514.9	7,585.0	7,582.3	33.4	13.3	91.22	-259.2	-2,916.3	1,247.0	1,218.7	28.26	44.134	
8,050.0	7,523.3	7,591.4	7,588.7	33.6	13.3	91.90	-259.1	-2,916.0	1,244.2	1,215.7	28.46	43.715	
8,072.7	7,526.0	7,593.4	7,590.7	33.7	13.3	92.07	-259.0	-2,916.0	1,243.9	1,215.3	28.56	43.558	CC, ES
8,100.0	7,528.3	7,594.9	7,592.2	33.8	13.3	92.15	-259.0	-2,915.9	1,244.3	1,215.7	28.66	43.412	
8,149.7	7,530.0	7,595.2	7,592.5	34.0	13.3	91.96	-259.0	-2,915.9	1,247.4	1,218.5	28.88	43.199	
8,200.0	7,530.0	7,594.1	7,591.4	34.2	13.3	91.91	-259.0	-2,915.9	1,253.0	1,223.7	29.36	42.676	
8,300.0	7,530.0	7,591.7	7,589.0	34.7	13.3	91.80	-259.0	-2,916.0	1,270.1	1,239.6	30.42	41.749	
8,400.0	7,530.0	7,589.2	7,586.5	35.3	13.3	91.68	-259.1	-2,916.1	1,294.6	1,263.0	31.59	40.984	
8,500.0	7,530.0	7,586.7	7,584.0	35.9	13.3	91.57	-259.2	-2,916.2	1,326.2	1,293.4	32.84	40.383	
8,600.0	7,530.0	7,584.1	7,581.4	36.6	13.3	91.45	-259.2	-2,916.3	1,364.5	1,330.3	34.17	39.936	
8,700.0	7,530.0	7,581.4	7,578.7	37.4	13.3	91.32	-259.3	-2,916.4	1,408.8	1,373.3	35.55	39.628	
8,800.0	7,530.0	7,578.6	7,576.0	38.3	13.3	91.20	-259.4	-2,916.5	1,458.6	1,421.7	36.98	39.440	
8,900.0	7,530.0	7,575.8	7,573.1	39.2	13.3	91.07	-259.5	-2,916.6	1,513.4	1,475.0	38.46	39.355	SF

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - WOOLLEY 22-7 (EXISTING) - ENCANA WELL - SU

Offset Site Error: 0.0 ft

Survey Program: 71-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
8,400.0	7,530.0	7,762.7	7,540.1	35.3	28.8	89.28	-1,715.7	-2,698.0	1,496.6	1,449.6	46.97	31.860	
8,500.0	7,530.0	7,762.9	7,540.3	35.9	28.8	89.29	-1,715.7	-2,698.0	1,425.3	1,377.1	48.22	29.555	
8,600.0	7,530.0	7,763.1	7,540.5	36.6	28.8	89.30	-1,715.7	-2,698.0	1,357.6	1,308.0	49.55	27.400	
8,700.0	7,530.0	7,763.2	7,540.7	37.4	28.8	89.31	-1,715.7	-2,698.0	1,294.1	1,243.2	50.93	25.410	
8,800.0	7,530.0	7,763.4	7,540.9	38.3	28.8	89.32	-1,715.7	-2,698.0	1,235.4	1,183.1	52.36	23.595	
8,900.0	7,530.0	7,763.6	7,541.0	39.2	28.8	89.33	-1,715.7	-2,698.0	1,182.3	1,128.5	53.83	21.963	
9,000.0	7,530.0	7,763.8	7,541.2	40.1	28.8	89.34	-1,715.7	-2,698.0	1,135.6	1,080.3	55.34	20.521	
9,100.0	7,530.0	7,764.0	7,541.4	41.2	28.8	89.35	-1,715.7	-2,698.0	1,096.0	1,039.1	56.87	19.271	
9,200.0	7,530.0	7,764.2	7,541.6	42.2	28.8	89.36	-1,715.7	-2,698.0	1,064.3	1,005.9	58.43	18.215	
9,300.0	7,530.0	7,764.4	7,541.8	43.3	28.8	89.37	-1,715.7	-2,698.0	1,041.4	981.4	60.01	17.353	
9,400.0	7,530.0	7,764.6	7,542.0	44.5	28.8	89.38	-1,715.7	-2,698.0	1,027.7	966.1	61.61	16.680	
9,491.9	7,530.0	7,764.8	7,542.2	45.6	28.8	89.39	-1,715.7	-2,698.0	1,023.5	960.5	63.09	16.223	CC
9,500.0	7,530.0	7,764.8	7,542.2	45.7	28.8	89.40	-1,715.7	-2,698.0	1,023.6	960.4	63.22	16.190	ES
9,600.0	7,530.0	7,765.0	7,542.4	46.9	28.8	89.41	-1,715.7	-2,698.0	1,029.2	964.4	64.85	15.872	
9,700.0	7,530.0	7,765.2	7,542.6	48.2	28.8	89.42	-1,715.7	-2,698.0	1,044.5	978.0	66.48	15.710	
9,800.0	7,530.0	7,765.3	7,542.8	49.5	28.8	89.43	-1,715.7	-2,698.0	1,068.9	1,000.8	68.13	15.689	SF
9,900.0	7,530.0	7,765.5	7,543.0	50.8	28.8	89.44	-1,715.7	-2,698.0	1,101.9	1,032.1	69.79	15.790	
10,000.0	7,530.0	7,765.7	7,543.1	52.2	28.8	89.45	-1,715.7	-2,698.0	1,142.7	1,071.3	71.45	15.993	
10,100.0	7,530.0	7,765.9	7,543.3	53.5	28.8	89.46	-1,715.7	-2,698.0	1,190.6	1,117.5	73.12	16.282	
10,200.0	7,530.0	7,766.1	7,543.5	54.9	28.8	89.47	-1,715.7	-2,698.0	1,244.6	1,169.8	74.80	16.640	
10,300.0	7,530.0	7,766.3	7,543.7	56.3	28.8	89.48	-1,715.7	-2,698.0	1,304.1	1,227.6	76.48	17.052	
10,400.0	7,530.0	7,766.5	7,543.9	57.8	28.8	89.49	-1,715.7	-2,698.0	1,368.3	1,290.2	78.17	17.505	
10,500.0	7,530.0	7,766.7	7,544.1	59.2	28.8	89.50	-1,715.7	-2,698.0	1,436.7	1,356.8	79.86	17.990	
10,600.0	7,530.0	7,766.9	7,544.3	60.7	28.8	89.51	-1,715.7	-2,698.0	1,508.5	1,427.0	81.56	18.497	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - WOOLLEY 4-0-7 (EXISTING) - ENCANA WELL - SU

Offset Site Error: 0.0 ft

Survey Program: 71-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
4,200.0	4,102.2	4,245.0	4,164.6	16.7	15.6	-10.36	263.4	-2,332.8	1,531.1	1,511.6	19.48	78.591	
4,300.0	4,199.0	4,329.9	4,249.3	17.2	15.8	-10.38	266.7	-2,330.8	1,504.1	1,484.3	19.80	75.948	
4,400.0	4,295.8	4,411.1	4,330.5	17.6	15.9	-10.41	269.6	-2,329.6	1,478.0	1,457.9	20.12	73.462	
4,500.0	4,392.6	4,509.9	4,429.3	18.1	16.0	-10.50	271.9	-2,328.8	1,452.5	1,432.1	20.43	71.111	
4,600.0	4,489.3	4,600.0	4,519.3	18.6	16.0	-10.67	271.9	-2,328.0	1,426.9	1,406.2	20.71	68.902	
4,700.0	4,586.1	4,687.5	4,606.9	19.1	16.1	-10.85	271.7	-2,327.9	1,402.0	1,381.0	20.99	66.787	
4,800.0	4,682.9	4,774.6	4,694.0	19.6	16.2	-11.04	271.4	-2,328.4	1,377.7	1,356.4	21.27	64.768	
4,900.0	4,779.6	4,861.9	4,781.3	20.1	16.2	-11.25	270.8	-2,329.4	1,354.1	1,332.6	21.55	62.831	
5,000.0	4,876.4	4,961.0	4,880.3	20.6	16.3	-11.51	269.8	-2,331.0	1,330.9	1,309.1	21.84	60.931	
5,100.0	4,973.2	5,061.1	4,980.4	21.0	16.4	-11.80	268.5	-2,332.4	1,307.5	1,285.3	22.14	59.057	
5,200.0	5,070.0	5,156.9	5,076.2	21.5	16.4	-12.09	267.2	-2,333.6	1,284.0	1,261.5	22.44	57.217	
5,300.0	5,166.7	5,253.0	5,172.3	22.0	16.5	-12.38	266.2	-2,334.9	1,260.6	1,237.9	22.75	55.416	
5,400.0	5,263.5	5,349.7	5,269.0	22.5	16.6	-12.67	265.3	-2,336.3	1,237.4	1,214.3	23.07	53.645	
5,500.0	5,360.3	5,448.0	5,367.2	23.0	16.6	-12.96	264.7	-2,337.7	1,214.1	1,190.7	23.39	51.899	
5,600.0	5,457.0	5,547.7	5,466.9	23.5	16.7	-13.25	264.5	-2,338.9	1,190.7	1,167.0	23.73	50.174	
5,700.0	5,553.8	5,643.3	5,562.5	23.9	16.8	-13.53	264.5	-2,339.9	1,167.2	1,143.2	24.07	48.487	
5,800.0	5,650.6	5,737.7	5,656.9	24.4	16.9	-13.80	264.9	-2,341.2	1,144.0	1,119.6	24.42	46.851	
5,900.0	5,747.4	5,835.6	5,754.8	24.9	17.0	-14.07	265.5	-2,342.6	1,120.9	1,096.1	24.78	45.241	
6,000.0	5,844.1	5,933.8	5,853.0	25.4	17.1	-14.36	266.2	-2,344.0	1,097.7	1,072.6	25.14	43.665	
6,100.0	5,940.9	6,032.5	5,951.7	25.9	17.2	-14.64	267.2	-2,345.2	1,074.4	1,048.9	25.51	42.116	
6,200.0	6,037.7	6,131.5	6,050.7	26.4	17.3	-14.93	268.3	-2,346.2	1,051.0	1,025.1	25.89	40.595	
6,300.0	6,134.4	6,231.1	6,150.3	26.8	17.4	-15.21	269.9	-2,347.1	1,027.4	1,001.2	26.28	39.095	
6,400.0	6,231.2	6,329.0	6,248.1	27.3	17.6	-15.48	271.7	-2,347.8	1,003.7	977.0	26.67	37.635	
6,500.0	6,328.0	6,425.6	6,344.8	27.8	17.7	-15.77	273.4	-2,348.4	980.0	952.9	27.06	36.215	
6,600.0	6,424.8	6,520.9	6,440.0	28.3	17.8	-16.08	274.9	-2,349.2	956.4	928.9	27.45	34.836	
6,700.0	6,521.5	6,615.9	6,535.0	28.8	17.9	-16.41	276.3	-2,350.1	933.0	905.1	27.85	33.498	
6,800.0	6,618.3	6,714.8	6,633.8	29.3	18.0	-16.77	277.7	-2,351.1	909.7	881.4	28.27	32.177	
6,900.0	6,715.1	6,813.3	6,732.4	29.8	18.1	-17.13	279.4	-2,351.9	886.2	857.5	28.69	30.884	
6,984.3	6,796.7	6,894.9	6,814.0	30.2	18.2	-17.46	280.6	-2,352.6	866.4	837.3	29.05	29.823	
7,000.0	6,811.9	6,910.1	6,829.1	30.2	18.2	-12.44	280.8	-2,352.7	862.7	833.6	29.06	29.687	
7,050.0	6,860.3	6,958.5	6,877.5	30.5	18.3	4.18	281.3	-2,353.0	850.7	821.7	29.04	29.297	
7,100.0	6,908.6	7,009.8	6,928.8	30.7	18.4	19.97	281.9	-2,353.4	838.5	809.5	28.98	28.933	
7,150.0	6,956.6	7,061.4	6,980.4	30.9	18.4	33.51	282.7	-2,353.5	826.0	797.1	28.91	28.574	
7,200.0	7,004.0	7,112.1	7,031.1	31.1	18.5	44.61	283.8	-2,353.4	813.3	784.4	28.85	28.188	
7,250.0	7,050.6	7,160.6	7,079.6	31.2	18.6	53.69	285.1	-2,353.1	800.6	771.8	28.86	27.740	
7,300.0	7,096.1	7,206.0	7,125.0	31.4	18.7	61.23	286.3	-2,352.8	788.5	759.5	28.97	27.213	
7,350.0	7,140.4	7,250.1	7,169.1	31.6	18.7	67.67	287.5	-2,352.4	777.1	747.9	29.21	26.602	
7,400.0	7,183.1	7,292.6	7,211.6	31.7	18.8	73.30	288.6	-2,352.1	766.8	737.2	29.57	25.930	
7,450.0	7,224.2	7,333.0	7,251.9	31.8	18.8	78.26	289.7	-2,351.7	758.1	728.0	30.03	25.245	
7,500.0	7,263.4	7,370.9	7,289.8	32.0	18.9	82.64	290.6	-2,351.4	751.3	720.8	30.53	24.610	
7,550.0	7,300.5	7,406.8	7,325.7	32.1	18.9	86.50	291.5	-2,351.1	746.8	715.8	31.02	24.078	
7,600.0	7,335.4	7,440.4	7,359.4	32.2	19.0	89.87	292.3	-2,350.9	745.1	713.7	31.45	23.692	
7,603.7	7,337.8	7,442.8	7,361.7	32.2	19.0	90.09	292.4	-2,350.9	745.1	713.6	31.48	23.667	CC, ES
7,650.0	7,367.8	7,471.7	7,390.6	32.4	19.0	92.73	293.0	-2,350.7	746.5	714.7	31.79	23.482	
7,700.0	7,397.6	7,500.7	7,419.6	32.5	19.1	95.11	293.7	-2,350.5	751.2	719.2	32.02	23.461	SF
7,750.0	7,424.7	7,527.7	7,446.5	32.6	19.1	97.00	294.3	-2,350.3	759.5	727.4	32.14	23.629	
7,800.0	7,448.9	7,551.6	7,470.5	32.8	19.2	98.34	294.8	-2,350.1	771.5	739.3	32.17	23.985	
7,850.0	7,470.1	7,572.4	7,491.2	32.9	19.2	99.11	295.3	-2,349.9	787.2	755.1	32.12	24.511	
7,900.0	7,488.2	7,589.9	7,508.8	33.1	19.2	99.25	295.7	-2,349.8	806.6	774.6	32.03	25.182	
7,950.0	7,503.2	7,604.1	7,523.0	33.2	19.2	98.75	296.0	-2,349.6	829.6	797.6	31.95	25.966	
8,000.0	7,514.9	7,615.0	7,533.8	33.4	19.3	97.56	296.3	-2,349.5	855.8	823.9	31.90	26.827	
8,050.0	7,523.3	7,622.4	7,541.2	33.6	19.3	95.63	296.4	-2,349.4	885.1	853.2	31.92	27.731	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - WOOLLEY 4-0-7 (EXISTING) - ENCANA WELL - SU

Offset Site Error: 0.0 ft

Survey Program: 71-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
8,100.0	7,528.3	7,626.4	7,545.2	33.8	19.3	92.91	296.5	-2,349.3	917.0	885.0	32.01	28.646	
8,149.7	7,530.0	7,626.9	7,545.7	34.0	19.3	89.38	296.6	-2,349.3	951.1	918.9	32.19	29.548	
8,200.0	7,530.0	7,625.7	7,544.5	34.2	19.3	89.28	296.5	-2,349.4	987.1	954.4	32.67	30.215	
8,300.0	7,530.0	7,623.3	7,542.1	34.7	19.3	89.08	296.5	-2,349.4	1,062.3	1,028.6	33.72	31.500	
8,400.0	7,530.0	7,620.9	7,539.7	35.3	19.3	88.87	296.4	-2,349.4	1,141.3	1,106.4	34.88	32.717	
8,500.0	7,530.0	7,618.5	7,537.3	35.9	19.3	88.67	296.4	-2,349.4	1,223.3	1,187.2	36.13	33.859	
8,600.0	7,530.0	7,616.1	7,535.0	36.6	19.3	88.47	296.3	-2,349.5	1,307.9	1,270.4	37.45	34.925	
8,700.0	7,530.0	7,613.7	7,532.6	37.4	19.3	88.27	296.2	-2,349.5	1,394.5	1,355.7	38.82	35.918	
8,800.0	7,530.0	7,611.4	7,530.2	38.3	19.3	88.07	296.2	-2,349.5	1,482.8	1,442.5	40.25	36.840	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - WOOLLEY 41-7 (EXISTING) - ENCANA WELL - NO

Offset Site Error: 0.0 ft

Survey Program: 8370-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-138.81	-188.7	-165.1	250.8				
100.0	100.0	96.0	96.0	0.2	0.2	-138.81	-188.7	-165.1	250.7	250.4	0.32	784.555	
200.0	200.0	196.0	196.0	0.3	0.3	-138.81	-188.7	-165.1	250.7	250.1	0.67	374.988	
300.0	300.0	296.0	296.0	0.5	0.5	-61.92	-188.7	-165.1	250.3	249.3	1.02	245.801	
400.0	400.0	396.0	396.0	0.7	0.7	-62.46	-188.7	-165.1	249.1	247.7	1.37	181.634	
500.0	499.9	495.9	495.9	0.9	0.9	-63.37	-188.7	-165.1	247.1	245.4	1.73	142.764	
600.0	599.7	595.7	595.7	1.1	1.0	-64.67	-188.7	-165.1	244.4	242.3	2.10	116.382	
700.0	699.4	695.4	695.4	1.3	1.2	-66.38	-188.7	-165.1	241.2	238.7	2.48	97.119	
800.0	798.9	794.9	794.9	1.5	1.4	-68.53	-188.7	-165.1	237.5	234.6	2.88	82.345	
900.0	898.3	894.3	894.3	1.8	1.6	-71.13	-188.7	-165.1	233.6	230.3	3.31	70.636	
1,000.0	997.4	993.4	993.4	2.0	1.7	-74.23	-188.7	-165.1	229.6	225.9	3.75	61.163	
1,100.0	1,096.3	1,092.3	1,092.3	2.3	1.9	-77.84	-188.7	-165.1	226.0	221.8	4.23	53.424	
1,200.0	1,194.9	1,190.9	1,190.9	2.7	2.1	-81.96	-188.7	-165.1	223.1	218.4	4.74	47.102	
1,300.0	1,293.3	1,289.3	1,289.3	3.0	2.3	-86.57	-188.7	-165.1	221.3	216.0	5.27	41.991	
1,368.5	1,360.4	1,356.4	1,356.4	3.3	2.4	-90.00	-188.7	-165.1	220.8	215.2	5.65	39.092	CC
1,400.0	1,391.2	1,387.2	1,387.2	3.4	2.4	-91.64	-188.7	-165.1	220.9	215.1	5.82	37.946	ES
1,500.0	1,488.9	1,484.9	1,484.9	3.8	2.6	-97.07	-188.7	-165.1	222.6	216.2	6.39	34.858	
1,600.0	1,586.1	1,582.1	1,582.1	4.3	2.8	-102.74	-188.7	-165.1	226.8	219.8	6.95	32.634	
1,659.9	1,644.1	1,640.1	1,640.1	4.5	2.9	-106.19	-188.7	-165.1	230.6	223.3	7.28	31.690	
1,700.0	1,683.0	1,679.0	1,679.0	4.7	2.9	-108.50	-188.7	-165.1	233.7	226.2	7.49	31.215	
1,800.0	1,779.7	1,775.7	1,775.7	5.2	3.1	-113.99	-188.7	-165.1	243.1	235.1	7.98	30.458	
1,900.0	1,876.5	1,872.5	1,872.5	5.6	3.3	-119.05	-188.7	-165.1	254.6	246.2	8.43	30.191	SF
2,000.0	1,973.3	1,969.3	1,969.3	6.1	3.4	-123.66	-188.7	-165.1	268.1	259.2	8.85	30.290	
2,100.0	2,070.0	2,066.0	2,066.0	6.6	3.6	-127.83	-188.7	-165.1	283.1	273.9	9.24	30.657	
2,200.0	2,166.8	2,162.8	2,162.8	7.1	3.8	-131.57	-188.7	-165.1	299.6	290.0	9.59	31.220	
2,300.0	2,263.6	2,259.6	2,259.6	7.5	3.9	-134.92	-188.7	-165.1	317.1	307.2	9.93	31.922	
2,400.0	2,360.4	2,356.4	2,356.4	8.0	4.1	-137.93	-188.7	-165.1	335.7	325.4	10.26	32.720	
2,500.0	2,457.1	2,453.1	2,453.1	8.5	4.3	-140.62	-188.7	-165.1	355.0	344.5	10.57	33.581	
2,600.0	2,553.9	2,549.9	2,549.9	9.0	4.5	-143.03	-188.7	-165.1	375.1	364.2	10.88	34.480	
2,700.0	2,650.7	2,646.7	2,646.7	9.4	4.6	-145.20	-188.7	-165.1	395.8	384.6	11.18	35.399	
2,800.0	2,747.4	2,743.4	2,743.4	9.9	4.8	-147.16	-188.7	-165.1	416.9	405.4	11.48	36.325	
2,900.0	2,844.2	2,840.2	2,840.2	10.4	5.0	-148.93	-188.7	-165.1	438.5	426.7	11.77	37.245	
3,000.0	2,941.0	2,937.0	2,937.0	10.9	5.1	-150.54	-188.7	-165.1	460.4	448.4	12.07	38.154	
3,100.0	3,037.8	3,033.8	3,033.8	11.4	5.3	-152.00	-188.7	-165.1	482.7	470.3	12.36	39.046	
3,200.0	3,134.5	3,130.5	3,130.5	11.9	5.5	-153.33	-188.7	-165.1	505.3	492.6	12.66	39.917	
3,300.0	3,231.3	3,227.3	3,227.3	12.3	5.6	-154.56	-188.7	-165.1	528.0	515.1	12.95	40.764	
3,400.0	3,328.1	3,324.1	3,324.1	12.8	5.8	-155.68	-188.7	-165.1	551.0	537.8	13.25	41.586	
3,500.0	3,424.8	3,420.8	3,420.8	13.3	6.0	-156.71	-188.7	-165.1	574.2	560.7	13.55	42.382	
3,600.0	3,521.6	3,517.6	3,517.6	13.8	6.1	-157.66	-188.7	-165.1	597.6	583.7	13.85	43.151	
3,700.0	3,618.4	3,614.4	3,614.4	14.3	6.3	-158.54	-188.7	-165.1	621.1	606.9	14.15	43.894	
3,800.0	3,715.2	3,711.2	3,711.2	14.7	6.5	-159.35	-188.7	-165.1	644.7	630.2	14.45	44.610	
3,900.0	3,811.9	3,807.9	3,807.9	15.2	6.6	-160.11	-188.7	-165.1	668.4	653.7	14.76	45.300	
4,000.0	3,908.7	3,904.7	3,904.7	15.7	6.8	-160.82	-188.7	-165.1	692.2	677.2	15.06	45.965	
4,100.0	4,005.5	4,001.5	4,001.5	16.2	7.0	-161.48	-188.7	-165.1	716.2	700.8	15.37	46.606	
4,200.0	4,102.2	4,098.2	4,098.2	16.7	7.2	-162.10	-188.7	-165.1	740.2	724.5	15.67	47.222	
4,300.0	4,199.0	4,195.0	4,195.0	17.2	7.3	-162.68	-188.7	-165.1	764.3	748.3	15.98	47.816	
4,400.0	4,295.8	4,291.8	4,291.8	17.6	7.5	-163.22	-188.7	-165.1	788.5	772.2	16.29	48.388	
4,500.0	4,392.6	4,388.6	4,388.6	18.1	7.7	-163.73	-188.7	-165.1	812.7	796.1	16.61	48.939	
4,600.0	4,489.3	4,485.3	4,485.3	18.6	7.8	-164.22	-188.7	-165.1	837.0	820.0	16.92	49.469	
4,700.0	4,586.1	4,582.1	4,582.1	19.1	8.0	-164.67	-188.7	-165.1	861.3	844.1	17.23	49.980	
4,800.0	4,682.9	4,678.9	4,678.9	19.6	8.2	-165.10	-188.7	-165.1	885.7	868.1	17.55	50.472	
4,900.0	4,779.6	4,775.6	4,775.6	20.1	8.3	-165.51	-188.7	-165.1	910.1	892.3	17.86	50.947	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - WOOLLEY 41-7 (EXISTING) - ENCANA WELL - NO

Offset Site Error: 0.0 ft

Survey Program: 8370-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,000.0	4,876.4	4,872.4	4,872.4	20.6	8.5	-165.89	-188.7	-165.1	934.6	916.4	18.18	51.405	
5,100.0	4,973.2	4,969.2	4,969.2	21.0	8.7	-166.26	-188.7	-165.1	959.1	940.6	18.50	51.847	
5,200.0	5,070.0	5,066.0	5,066.0	21.5	8.8	-166.61	-188.7	-165.1	983.6	964.8	18.82	52.273	
5,300.0	5,166.7	5,162.7	5,162.7	22.0	9.0	-166.94	-188.7	-165.1	1,008.2	989.1	19.14	52.684	
5,400.0	5,263.5	5,259.5	5,259.5	22.5	9.2	-167.25	-188.7	-165.1	1,032.8	1,013.4	19.46	53.081	
5,500.0	5,360.3	5,356.3	5,356.3	23.0	9.3	-167.56	-188.7	-165.1	1,057.5	1,037.7	19.78	53.465	
5,600.0	5,457.0	5,453.0	5,453.0	23.5	9.5	-167.84	-188.7	-165.1	1,082.1	1,062.0	20.10	53.836	
5,700.0	5,553.8	5,549.8	5,549.8	23.9	9.7	-168.12	-188.7	-165.1	1,106.8	1,086.4	20.42	54.195	
5,800.0	5,650.6	5,646.6	5,646.6	24.4	9.9	-168.38	-188.7	-165.1	1,131.5	1,110.8	20.75	54.541	
5,900.0	5,747.4	5,743.4	5,743.4	24.9	10.0	-168.63	-188.7	-165.1	1,156.3	1,135.2	21.07	54.877	
6,000.0	5,844.1	5,840.1	5,840.1	25.4	10.2	-168.87	-188.7	-165.1	1,181.0	1,159.6	21.39	55.202	
6,100.0	5,940.9	5,936.9	5,936.9	25.9	10.4	-169.10	-188.7	-165.1	1,205.8	1,184.1	21.72	55.516	
6,200.0	6,037.7	6,033.7	6,033.7	26.4	10.5	-169.32	-188.7	-165.1	1,230.6	1,208.5	22.04	55.821	
6,300.0	6,134.4	6,130.4	6,130.4	26.8	10.7	-169.54	-188.7	-165.1	1,255.4	1,233.0	22.37	56.117	
6,400.0	6,231.2	6,227.2	6,227.2	27.3	10.9	-169.74	-188.7	-165.1	1,280.2	1,257.5	22.70	56.403	
6,500.0	6,328.0	6,324.0	6,324.0	27.8	11.0	-169.94	-188.7	-165.1	1,305.0	1,282.0	23.02	56.681	
6,600.0	6,424.8	6,420.8	6,420.8	28.3	11.2	-170.13	-188.7	-165.1	1,329.9	1,306.5	23.35	56.950	
6,700.0	6,521.5	6,517.5	6,517.5	28.8	11.4	-170.31	-188.7	-165.1	1,354.7	1,331.1	23.68	57.212	
6,800.0	6,618.3	6,614.3	6,614.3	29.3	11.5	-170.49	-188.7	-165.1	1,379.6	1,355.6	24.01	57.466	
6,900.0	6,715.1	6,711.1	6,711.1	29.8	11.7	-170.66	-188.7	-165.1	1,404.5	1,380.2	24.34	57.712	
6,984.3	6,796.7	6,792.7	6,792.7	30.2	11.9	-170.80	-188.7	-165.1	1,425.5	1,400.9	24.61	57.915	
7,000.0	6,811.9	6,807.9	6,807.9	30.2	11.9	-165.76	-188.7	-165.1	1,429.3	1,404.6	24.73	57.795	
7,050.0	6,860.3	6,856.3	6,856.3	30.5	12.0	-149.42	-188.7	-165.1	1,440.7	1,415.7	25.09	57.421	
7,100.0	6,908.6	6,904.6	6,904.6	30.7	12.1	-134.43	-188.7	-165.1	1,450.9	1,425.5	25.41	57.103	
7,150.0	6,956.6	6,952.6	6,952.6	30.9	12.1	-122.21	-188.7	-165.1	1,459.7	1,434.1	25.68	56.851	
7,200.0	7,004.0	7,000.0	7,000.0	31.1	12.2	-112.95	-188.7	-165.1	1,467.3	1,441.4	25.90	56.664	
7,250.0	7,050.6	7,046.6	7,046.6	31.2	12.3	-106.13	-188.7	-165.1	1,473.7	1,447.7	26.07	56.535	
7,300.0	7,096.1	7,092.1	7,092.1	31.4	12.4	-101.19	-188.7	-165.1	1,479.0	1,452.8	26.20	56.449	
7,350.0	7,140.4	7,136.4	7,136.4	31.6	12.5	-97.62	-188.7	-165.1	1,483.2	1,456.9	26.30	56.389	
7,400.0	7,183.1	7,179.1	7,179.1	31.7	12.5	-95.07	-188.7	-165.1	1,486.5	1,460.1	26.39	56.337	
7,450.0	7,224.2	7,220.2	7,220.2	31.8	12.6	-93.29	-188.7	-165.1	1,489.0	1,462.5	26.46	56.276	
7,500.0	7,263.4	7,259.4	7,259.4	32.0	12.7	-92.08	-188.7	-165.1	1,490.8	1,464.2	26.53	56.192	
7,550.0	7,300.5	7,296.5	7,296.5	32.1	12.7	-91.31	-188.7	-165.1	1,492.1	1,465.5	26.61	56.073	
7,600.0	7,335.4	7,331.4	7,331.4	32.2	12.8	-90.86	-188.7	-165.1	1,493.0	1,466.3	26.70	55.916	
7,650.0	7,367.8	7,363.8	7,363.8	32.4	12.9	-90.65	-188.7	-165.1	1,493.8	1,467.0	26.81	55.718	
7,700.0	7,397.6	7,393.6	7,393.6	32.5	12.9	-90.60	-188.7	-165.1	1,494.5	1,467.6	26.94	55.481	
7,750.0	7,424.7	7,420.7	7,420.7	32.6	13.0	-90.65	-188.7	-165.1	1,495.3	1,468.2	27.08	55.212	
7,800.0	7,448.9	7,444.9	7,444.9	32.8	13.0	-90.75	-188.7	-165.1	1,496.4	1,469.2	27.25	54.916	
7,850.0	7,470.1	7,466.1	7,466.1	32.9	13.0	-90.86	-188.7	-165.1	1,497.9	1,470.5	27.44	54.599	
7,900.0	7,488.2	7,484.2	7,484.2	33.1	13.1	-90.94	-188.7	-165.1	1,500.0	1,472.3	27.64	54.269	
7,950.0	7,503.2	7,499.2	7,499.2	33.2	13.1	-90.95	-188.7	-165.1	1,502.6	1,474.8	27.86	53.933	
8,000.0	7,514.9	7,510.9	7,510.9	33.4	13.1	-90.88	-188.7	-165.1	1,506.0	1,477.9	28.10	53.602	
8,050.0	7,523.3	7,519.3	7,519.3	33.6	13.1	-90.70	-188.7	-165.1	1,510.1	1,481.8	28.34	53.288	
8,100.0	7,528.3	7,524.3	7,524.3	33.8	13.1	-90.41	-188.7	-165.1	1,515.0	1,486.4	28.58	53.007	
8,149.7	7,530.0	7,526.0	7,526.0	34.0	13.1	-90.00	-188.7	-165.1	1,520.7	1,491.8	28.81	52.776	
8,200.0	7,530.0	7,526.0	7,526.0	34.2	13.1	-90.00	-188.7	-165.1	1,527.6	1,498.3	29.30	52.140	
8,300.0	7,530.0	7,526.0	7,526.0	34.7	13.1	-90.00	-188.7	-165.1	1,546.1	1,515.8	30.35	50.936	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - WOOLLEY 42-7 ENCANA (EXISTING) - ENCANA -

Offset Site Error: 0.0 ft

Survey Program: 8381-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
8,800.0	7,530.0	7,534.0	7,534.0	38.3	13.1	-90.00	-1,635.6	-283.8	1,519.3	1,482.4	36.92	41.148	
8,900.0	7,530.0	7,534.0	7,534.0	39.2	13.1	-90.00	-1,635.6	-283.8	1,481.9	1,443.5	38.40	38.594	
9,000.0	7,530.0	7,534.0	7,534.0	40.1	13.1	-90.00	-1,635.6	-283.8	1,450.4	1,410.5	39.90	36.347	
9,100.0	7,530.0	7,534.0	7,534.0	41.2	13.1	-90.00	-1,635.6	-283.8	1,425.2	1,383.8	41.44	34.393	
9,200.0	7,530.0	7,534.0	7,534.0	42.2	13.1	-90.00	-1,635.6	-283.8	1,406.7	1,363.7	43.00	32.716	
9,300.0	7,530.0	7,534.0	7,534.0	43.3	13.1	-90.00	-1,635.6	-283.8	1,395.2	1,350.6	44.58	31.298	
9,400.0	7,530.0	7,534.0	7,534.0	44.5	13.1	-90.00	-1,635.6	-283.8	1,390.7	1,344.6	46.18	30.119	
9,411.8	7,530.0	7,534.0	7,534.0	44.6	13.1	-90.00	-1,635.6	-283.8	1,390.7	1,344.3	46.37	29.994	CC, ES
9,500.0	7,530.0	7,534.0	7,534.0	45.7	13.1	-90.00	-1,635.6	-283.8	1,393.5	1,345.7	47.79	29.160	
9,600.0	7,530.0	7,534.0	7,534.0	46.9	13.1	-90.00	-1,635.6	-283.8	1,403.4	1,354.0	49.41	28.400	
9,700.0	7,530.0	7,534.0	7,534.0	48.2	13.1	-90.00	-1,635.6	-283.8	1,420.3	1,369.2	51.05	27.820	
9,800.0	7,530.0	7,534.0	7,534.0	49.5	13.1	-90.00	-1,635.6	-283.8	1,443.9	1,391.2	52.70	27.399	
9,900.0	7,530.0	7,534.0	7,534.0	50.8	13.1	-90.00	-1,635.6	-283.8	1,473.9	1,419.6	54.35	27.116	
10,000.0	7,530.0	7,534.0	7,534.0	52.2	13.1	-90.00	-1,635.6	-283.8	1,510.0	1,454.0	56.02	26.955	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - WOOLLEY A 1-7 (EXISTING) - ENCANA WELL - NO

Offset Site Error: 0.0 ft

Survey Program: 8320-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
1,600.0	1,586.1	1,606.1	1,606.1	4.3	2.8	-62.14	-1,116.8	-1,187.8	1,542.1	1,535.3	6.76	228.006	
1,659.9	1,644.1	1,664.1	1,664.1	4.5	2.9	-62.68	-1,116.8	-1,187.8	1,535.1	1,528.0	7.12	215.599	
1,700.0	1,683.0	1,703.0	1,703.0	4.7	3.0	-63.01	-1,116.8	-1,187.8	1,530.3	1,523.0	7.36	207.892	
1,800.0	1,779.7	1,799.7	1,799.7	5.2	3.1	-63.83	-1,116.8	-1,187.8	1,518.8	1,510.8	7.97	190.580	
1,900.0	1,876.5	1,896.5	1,896.5	5.6	3.3	-64.67	-1,116.8	-1,187.8	1,507.5	1,498.9	8.59	175.586	
2,000.0	1,973.3	1,993.3	1,993.3	6.1	3.5	-65.52	-1,116.8	-1,187.8	1,496.6	1,487.4	9.21	162.501	
2,100.0	2,070.0	2,090.0	2,090.0	6.6	3.6	-66.38	-1,116.8	-1,187.8	1,486.1	1,476.2	9.84	151.006	
2,200.0	2,166.8	2,186.8	2,186.8	7.1	3.8	-67.25	-1,116.8	-1,187.8	1,475.9	1,465.4	10.48	140.846	
2,300.0	2,263.6	2,283.6	2,283.6	7.5	4.0	-68.13	-1,116.8	-1,187.8	1,466.0	1,454.9	11.12	131.815	
2,400.0	2,360.4	2,380.4	2,380.4	8.0	4.2	-69.03	-1,116.8	-1,187.8	1,456.6	1,444.8	11.77	123.746	
2,500.0	2,457.1	2,477.1	2,477.1	8.5	4.3	-69.93	-1,116.8	-1,187.8	1,447.5	1,435.0	12.42	116.506	
2,600.0	2,553.9	2,573.9	2,573.9	9.0	4.5	-70.85	-1,116.8	-1,187.8	1,438.8	1,425.7	13.08	109.981	
2,700.0	2,650.7	2,670.7	2,670.7	9.4	4.7	-71.77	-1,116.8	-1,187.8	1,430.4	1,416.7	13.74	104.080	
2,800.0	2,747.4	2,767.4	2,767.4	9.9	4.8	-72.71	-1,116.8	-1,187.8	1,422.5	1,408.1	14.41	98.723	
2,900.0	2,844.2	2,864.2	2,864.2	10.4	5.0	-73.66	-1,116.8	-1,187.8	1,415.0	1,399.9	15.08	93.847	
3,000.0	2,941.0	2,961.0	2,961.0	10.9	5.2	-74.61	-1,116.8	-1,187.8	1,407.9	1,392.2	15.75	89.396	
3,100.0	3,037.8	3,057.8	3,057.8	11.4	5.3	-75.57	-1,116.8	-1,187.8	1,401.2	1,384.8	16.42	85.323	
3,200.0	3,134.5	3,154.5	3,154.5	11.9	5.5	-76.55	-1,116.8	-1,187.8	1,395.0	1,377.9	17.10	81.586	
3,300.0	3,231.3	3,251.3	3,251.3	12.3	5.7	-77.53	-1,116.8	-1,187.8	1,389.1	1,371.3	17.77	78.151	
3,400.0	3,328.1	3,348.1	3,348.1	12.8	5.8	-78.51	-1,116.8	-1,187.8	1,383.7	1,365.3	18.45	74.989	
3,500.0	3,424.8	3,444.8	3,444.8	13.3	6.0	-79.51	-1,116.8	-1,187.8	1,378.8	1,359.6	19.13	72.071	
3,600.0	3,521.6	3,541.6	3,541.6	13.8	6.2	-80.51	-1,116.8	-1,187.8	1,374.2	1,354.4	19.81	69.376	
3,700.0	3,618.4	3,638.4	3,638.4	14.3	6.4	-81.52	-1,116.8	-1,187.8	1,370.2	1,349.7	20.49	66.883	
3,800.0	3,715.2	3,735.2	3,735.2	14.7	6.5	-82.53	-1,116.8	-1,187.8	1,366.6	1,345.4	21.16	64.573	
3,900.0	3,811.9	3,831.9	3,831.9	15.2	6.7	-83.55	-1,116.8	-1,187.8	1,363.4	1,341.6	21.84	62.432	
4,000.0	3,908.7	3,928.7	3,928.7	15.7	6.9	-84.57	-1,116.8	-1,187.8	1,360.7	1,338.2	22.51	60.445	
4,100.0	4,005.5	4,025.5	4,025.5	16.2	7.0	-85.59	-1,116.8	-1,187.8	1,358.5	1,335.3	23.18	58.600	
4,200.0	4,102.2	4,122.2	4,122.2	16.7	7.2	-86.62	-1,116.8	-1,187.8	1,356.7	1,332.9	23.85	56.885	
4,300.0	4,199.0	4,219.0	4,219.0	17.2	7.4	-87.65	-1,116.8	-1,187.8	1,355.4	1,330.9	24.51	55.290	
4,400.0	4,295.8	4,315.8	4,315.8	17.6	7.5	-88.68	-1,116.8	-1,187.8	1,354.6	1,329.4	25.18	53.805	
4,500.0	4,392.6	4,412.6	4,412.6	18.1	7.7	-89.71	-1,116.8	-1,187.8	1,354.2	1,328.4	25.83	52.424	
4,528.1	4,419.7	4,439.7	4,439.7	18.3	7.7	-90.00	-1,116.8	-1,187.8	1,354.2	1,328.2	26.02	52.053	
4,600.0	4,489.3	4,509.3	4,509.3	18.6	7.9	-90.74	-1,116.8	-1,187.8	1,354.3	1,327.8	26.48	51.138	
4,700.0	4,586.1	4,606.1	4,606.1	19.1	8.0	-91.77	-1,116.8	-1,187.8	1,354.9	1,327.8	27.13	49.940	
4,800.0	4,682.9	4,702.9	4,702.9	19.6	8.2	-92.80	-1,116.8	-1,187.8	1,355.9	1,328.2	27.77	48.825	
4,900.0	4,779.6	4,799.6	4,799.6	20.1	8.4	-93.83	-1,116.8	-1,187.8	1,357.4	1,329.0	28.41	47.786	
5,000.0	4,876.4	4,896.4	4,896.4	20.6	8.5	-94.86	-1,116.8	-1,187.8	1,359.4	1,330.4	29.04	46.819	
5,100.0	4,973.2	4,993.2	4,993.2	21.0	8.7	-95.88	-1,116.8	-1,187.8	1,361.8	1,332.2	29.66	45.919	
5,200.0	5,070.0	5,090.0	5,090.0	21.5	8.9	-96.90	-1,116.8	-1,187.8	1,364.7	1,334.5	30.27	45.082	
5,300.0	5,166.7	5,186.7	5,186.7	22.0	9.1	-97.92	-1,116.8	-1,187.8	1,368.1	1,337.2	30.88	44.303	
5,400.0	5,263.5	5,283.5	5,283.5	22.5	9.2	-98.93	-1,116.8	-1,187.8	1,371.9	1,340.4	31.48	43.579	
5,500.0	5,360.3	5,380.3	5,380.3	23.0	9.4	-99.93	-1,116.8	-1,187.8	1,376.2	1,344.1	32.07	42.906	
5,600.0	5,457.0	5,477.0	5,477.0	23.5	9.6	-100.93	-1,116.8	-1,187.8	1,380.9	1,348.2	32.66	42.282	
5,700.0	5,553.8	5,573.8	5,573.8	23.9	9.7	-101.92	-1,116.8	-1,187.8	1,386.0	1,352.8	33.24	41.703	
5,800.0	5,650.6	5,670.6	5,670.6	24.4	9.9	-102.90	-1,116.8	-1,187.8	1,391.6	1,357.8	33.80	41.167	
5,900.0	5,747.4	5,767.4	5,767.4	24.9	10.1	-103.88	-1,116.8	-1,187.8	1,397.6	1,363.3	34.36	40.672	
6,000.0	5,844.1	5,864.1	5,864.1	25.4	10.2	-104.85	-1,116.8	-1,187.8	1,404.1	1,369.2	34.92	40.214	
6,100.0	5,940.9	5,960.9	5,960.9	25.9	10.4	-105.81	-1,116.8	-1,187.8	1,411.0	1,375.5	35.46	39.792	
6,200.0	6,037.7	6,057.7	6,057.7	26.4	10.6	-106.76	-1,116.8	-1,187.8	1,418.2	1,382.3	35.99	39.404	
6,300.0	6,134.4	6,154.4	6,154.4	26.8	10.7	-107.70	-1,116.8	-1,187.8	1,425.9	1,389.4	36.52	39.047	
6,400.0	6,231.2	6,251.2	6,251.2	27.3	10.9	-108.63	-1,116.8	-1,187.8	1,434.0	1,397.0	37.04	38.721	
6,500.0	6,328.0	6,348.0	6,348.0	27.8	11.1	-109.55	-1,116.8	-1,187.8	1,442.5	1,405.0	37.54	38.423	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - WOOLLEY A 1-7 (EXISTING) - ENCANA WELL - NO

Offset Site Error: 0.0 ft

Survey Program: 8320-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
6,600.0	6,424.8	6,444.8	6,444.8	28.3	11.2	-110.46	-1,116.8	-1,187.8	1,451.4	1,413.4	38.04	38.152	
6,700.0	6,521.5	6,541.5	6,541.5	28.8	11.4	-111.37	-1,116.8	-1,187.8	1,460.7	1,422.1	38.53	37.906	
6,800.0	6,618.3	6,638.3	6,638.3	29.3	11.6	-112.25	-1,116.8	-1,187.8	1,470.3	1,431.3	39.02	37.683	
6,900.0	6,715.1	6,735.1	6,735.1	29.8	11.8	-113.13	-1,116.8	-1,187.8	1,480.3	1,440.8	39.49	37.484	
6,984.3	6,796.7	6,816.7	6,816.7	30.2	11.9	-113.87	-1,116.8	-1,187.8	1,489.0	1,449.1	39.88	37.333	
7,000.0	6,811.9	6,831.9	6,831.9	30.2	11.9	-109.20	-1,116.8	-1,187.8	1,490.5	1,450.5	39.97	37.288	
7,050.0	6,860.3	6,880.3	6,880.3	30.5	12.0	-93.96	-1,116.8	-1,187.8	1,493.0	1,452.9	40.14	37.192	
7,100.0	6,908.6	6,928.6	6,928.6	30.7	12.1	-79.90	-1,116.8	-1,187.8	1,492.3	1,452.1	40.15	37.170	
7,150.0	6,956.6	6,976.6	6,976.6	30.9	12.2	-68.49	-1,116.8	-1,187.8	1,488.2	1,448.2	39.98	37.221	
7,200.0	7,004.0	7,024.0	7,024.0	31.1	12.3	-59.92	-1,116.8	-1,187.8	1,480.9	1,441.2	39.65	37.346	
7,250.0	7,050.6	7,070.6	7,070.6	31.2	12.3	-53.73	-1,116.8	-1,187.8	1,470.4	1,431.2	39.16	37.543	
7,300.0	7,096.1	7,116.1	7,116.1	31.4	12.4	-49.34	-1,116.8	-1,187.8	1,456.8	1,418.2	38.52	37.814	
7,350.0	7,140.4	7,160.4	7,160.4	31.6	12.5	-46.32	-1,116.8	-1,187.8	1,440.1	1,402.3	37.74	38.157	
7,400.0	7,183.1	7,203.1	7,203.1	31.7	12.6	-44.35	-1,116.8	-1,187.8	1,420.5	1,383.7	36.83	38.570	
7,450.0	7,224.2	7,244.2	7,244.2	31.8	12.6	-43.21	-1,116.8	-1,187.8	1,398.1	1,362.3	35.81	39.047	
7,500.0	7,263.4	7,283.4	7,283.4	32.0	12.7	-42.77	-1,116.8	-1,187.8	1,373.0	1,338.3	34.69	39.579	
7,550.0	7,300.5	7,320.5	7,320.5	32.1	12.8	-42.96	-1,116.8	-1,187.8	1,345.4	1,311.9	33.51	40.146	
7,600.0	7,335.4	7,355.4	7,355.4	32.2	12.8	-43.73	-1,116.8	-1,187.8	1,315.4	1,283.1	32.31	40.719	
7,650.0	7,367.8	7,387.8	7,387.8	32.4	12.9	-45.07	-1,116.8	-1,187.8	1,283.3	1,252.2	31.11	41.248	
7,700.0	7,397.6	7,417.6	7,417.6	32.5	12.9	-46.99	-1,116.8	-1,187.8	1,249.1	1,219.1	29.98	41.663	
7,750.0	7,424.7	7,444.7	7,444.7	32.6	13.0	-49.51	-1,116.8	-1,187.8	1,213.2	1,184.2	28.97	41.870	
7,800.0	7,448.9	7,468.9	7,468.9	32.8	13.0	-52.67	-1,116.8	-1,187.8	1,175.6	1,147.5	28.16	41.754	
7,850.0	7,470.1	7,490.1	7,490.1	32.9	13.1	-56.49	-1,116.8	-1,187.8	1,136.8	1,109.2	27.59	41.207	
7,900.0	7,488.2	7,508.2	7,508.2	33.1	13.1	-60.99	-1,116.8	-1,187.8	1,096.7	1,069.4	27.31	40.165	
7,950.0	7,503.2	7,523.2	7,523.2	33.2	13.1	-66.11	-1,116.8	-1,187.8	1,055.8	1,028.5	27.32	38.653	
8,000.0	7,514.9	7,534.9	7,534.9	33.4	13.2	-71.77	-1,116.8	-1,187.8	1,014.3	986.7	27.57	36.793	
8,050.0	7,523.3	7,543.3	7,543.3	33.6	13.2	-77.80	-1,116.8	-1,187.8	972.3	944.3	27.97	34.764	
8,100.0	7,528.3	7,548.3	7,548.3	33.8	13.2	-83.97	-1,116.8	-1,187.8	930.2	901.8	28.42	32.729	
8,149.7	7,530.0	7,550.0	7,550.0	34.0	13.2	-90.00	-1,116.8	-1,187.8	888.5	859.6	28.86	30.791	
8,200.0	7,530.0	7,550.0	7,550.0	34.2	13.2	-90.00	-1,116.8	-1,187.8	846.9	817.5	29.34	28.865	
8,300.0	7,530.0	7,550.0	7,550.0	34.7	13.2	-90.00	-1,116.8	-1,187.8	767.2	736.8	30.40	25.240	
8,400.0	7,530.0	7,550.0	7,550.0	35.3	13.2	-90.00	-1,116.8	-1,187.8	692.8	661.2	31.56	21.952	
8,500.0	7,530.0	7,550.0	7,550.0	35.9	13.2	-90.00	-1,116.8	-1,187.8	625.6	592.8	32.81	19.066	
8,600.0	7,530.0	7,550.0	7,550.0	36.6	13.2	-90.00	-1,116.8	-1,187.8	568.1	534.0	34.14	16.643	
8,700.0	7,530.0	7,550.0	7,550.0	37.4	13.2	-90.00	-1,116.8	-1,187.8	523.6	488.1	35.52	14.741	
8,800.0	7,530.0	7,550.0	7,550.0	38.3	13.2	-90.00	-1,116.8	-1,187.8	495.5	458.6	36.95	13.410	
8,893.0	7,530.0	7,550.0	7,550.0	39.1	13.2	-90.00	-1,116.8	-1,187.8	486.7	448.4	38.32	12.701	CC
8,900.0	7,530.0	7,550.0	7,550.0	39.2	13.2	-90.00	-1,116.8	-1,187.8	486.8	448.3	38.42	12.668	ES
9,000.0	7,530.0	7,550.0	7,550.0	40.1	13.2	-90.00	-1,116.8	-1,187.8	498.3	458.4	39.93	12.480	SF
9,100.0	7,530.0	7,550.0	7,550.0	41.2	13.2	-90.00	-1,116.8	-1,187.8	528.9	487.4	41.47	12.755	
9,200.0	7,530.0	7,550.0	7,550.0	42.2	13.2	-90.00	-1,116.8	-1,187.8	575.4	532.4	43.03	13.374	
9,300.0	7,530.0	7,550.0	7,550.0	43.3	13.2	-90.00	-1,116.8	-1,187.8	634.4	589.8	44.61	14.223	
9,400.0	7,530.0	7,550.0	7,550.0	44.5	13.2	-90.00	-1,116.8	-1,187.8	702.8	656.6	46.20	15.211	
9,500.0	7,530.0	7,550.0	7,550.0	45.7	13.2	-90.00	-1,116.8	-1,187.8	778.0	730.2	47.82	16.271	
9,600.0	7,530.0	7,550.0	7,550.0	46.9	13.2	-90.00	-1,116.8	-1,187.8	858.3	808.9	49.44	17.360	
9,700.0	7,530.0	7,550.0	7,550.0	48.2	13.2	-90.00	-1,116.8	-1,187.8	942.4	891.3	51.08	18.450	
9,800.0	7,530.0	7,550.0	7,550.0	49.5	13.2	-90.00	-1,116.8	-1,187.8	1,029.3	976.6	52.73	19.522	
9,900.0	7,530.0	7,550.0	7,550.0	50.8	13.2	-90.00	-1,116.8	-1,187.8	1,118.4	1,064.1	54.38	20.566	
10,000.0	7,530.0	7,550.0	7,550.0	52.2	13.2	-90.00	-1,116.8	-1,187.8	1,209.3	1,153.2	56.05	21.576	
10,100.0	7,530.0	7,550.0	7,550.0	53.5	13.2	-90.00	-1,116.8	-1,187.8	1,301.4	1,243.7	57.72	22.548	
10,200.0	7,530.0	7,550.0	7,550.0	54.9	13.2	-90.00	-1,116.8	-1,187.8	1,394.7	1,335.3	59.39	23.481	
10,300.0	7,530.0	7,550.0	7,550.0	56.3	13.2	-90.00	-1,116.8	-1,187.8	1,488.8	1,427.7	61.08	24.376	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Becky 2E-7H-E168 - Hz - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
7,500.0	7,263.4	9,733.0	7,817.0	32.0	43.7	90.51	153.4	-3,038.0	1,540.5	1,482.8	57.72	26.687	
7,550.0	7,300.5	9,701.1	7,817.0	32.1	43.2	93.09	121.5	-3,037.2	1,517.6	1,460.2	57.38	26.449	
7,600.0	7,335.4	9,666.6	7,817.0	32.2	42.7	95.19	87.0	-3,036.3	1,496.5	1,439.6	56.89	26.308	
7,650.0	7,367.8	9,629.7	7,817.0	32.4	42.2	96.87	50.1	-3,035.4	1,477.4	1,421.1	56.26	26.259	
7,700.0	7,397.6	9,590.5	7,817.0	32.5	41.6	98.22	10.9	-3,034.3	1,460.1	1,404.5	55.52	26.297	
7,750.0	7,424.7	9,549.2	7,817.0	32.6	40.9	99.30	-30.3	-3,033.3	1,444.6	1,389.9	54.68	26.418	
7,800.0	7,448.9	9,506.1	7,817.0	32.8	40.3	100.15	-73.4	-3,032.1	1,431.0	1,377.2	53.76	26.619	
7,850.0	7,470.1	9,461.3	7,817.0	32.9	39.6	100.82	-118.2	-3,031.0	1,419.1	1,366.3	52.76	26.895	
7,900.0	7,488.2	9,415.1	7,817.0	33.1	39.0	101.35	-164.4	-3,029.8	1,408.9	1,357.2	51.71	27.247	
7,950.0	7,503.2	9,367.7	7,817.0	33.2	38.3	101.75	-211.8	-3,028.5	1,400.5	1,349.9	50.61	27.670	
8,000.0	7,514.9	9,319.2	7,817.0	33.4	37.6	102.07	-260.2	-3,027.3	1,393.6	1,344.2	49.48	28.167	
8,050.0	7,523.3	9,270.1	7,817.0	33.6	36.9	102.31	-309.4	-3,026.0	1,388.4	1,340.1	48.32	28.735	
8,100.0	7,528.3	9,220.4	7,817.0	33.8	36.2	102.49	-359.0	-3,024.7	1,384.8	1,337.7	47.14	29.376	
8,149.7	7,530.0	9,170.8	7,817.0	34.0	35.5	102.62	-408.7	-3,023.4	1,382.8	1,336.8	45.96	30.086	
8,200.0	7,530.0	9,120.5	7,817.0	34.2	34.8	102.63	-458.9	-3,022.1	1,381.5	1,335.8	45.67	30.252	
8,300.0	7,530.0	9,020.5	7,817.0	34.7	33.4	102.65	-558.8	-3,019.5	1,378.9	1,333.8	45.18	30.519	
8,400.0	7,530.0	8,920.6	7,817.0	35.3	32.1	102.68	-658.8	-3,016.9	1,376.4	1,331.6	44.83	30.705	
8,500.0	7,530.0	8,820.6	7,817.0	35.9	30.8	102.70	-758.7	-3,014.3	1,373.9	1,329.3	44.58	30.817	
8,600.0	7,530.0	8,720.6	7,817.0	36.6	29.6	102.73	-858.6	-3,011.7	1,371.3	1,326.9	44.43	30.862	
8,700.0	7,530.0	8,620.7	7,817.0	37.4	28.5	102.75	-958.6	-3,009.1	1,368.8	1,324.4	44.38	30.842	
8,800.0	7,530.0	8,520.7	7,817.0	38.3	27.3	102.77	-1,058.5	-3,006.5	1,366.3	1,321.8	44.42	30.760	
8,900.0	7,530.0	8,420.7	7,817.0	39.2	26.3	102.80	-1,158.4	-3,003.9	1,363.7	1,319.2	44.54	30.616	
9,000.0	7,530.0	8,320.8	7,817.0	40.1	25.4	102.82	-1,258.4	-3,001.3	1,361.2	1,316.4	44.76	30.407	
9,100.0	7,530.0	8,220.8	7,817.0	41.2	24.5	102.85	-1,358.3	-2,998.7	1,358.6	1,313.6	45.09	30.134	
9,200.0	7,530.0	8,099.2	7,806.5	42.2	23.6	102.43	-1,479.2	-2,997.0	1,355.4	1,310.0	45.37	29.876	
9,300.0	7,530.0	7,984.1	7,773.6	43.3	22.8	101.05	-1,589.3	-2,998.7	1,350.8	1,304.7	46.05	29.333	
9,400.0	7,530.0	7,885.2	7,728.4	44.5	22.3	99.13	-1,677.1	-3,002.7	1,346.2	1,299.1	47.11	28.578	
9,500.0	7,530.0	7,803.8	7,680.5	45.7	21.9	97.08	-1,742.6	-3,007.6	1,343.4	1,295.0	48.41	27.752	
9,539.2	7,530.0	7,776.4	7,662.3	46.2	21.8	96.30	-1,763.0	-3,009.6	1,343.2	1,294.2	48.97	27.430	CC
9,600.0	7,530.0	7,738.2	7,635.5	46.9	21.6	95.14	-1,790.0	-3,012.6	1,343.9	1,294.1	49.85	26.958	ES
9,700.0	7,530.0	7,685.5	7,595.6	48.2	21.4	93.44	-1,824.1	-3,017.2	1,348.8	1,297.4	51.36	26.260	
9,800.0	7,530.0	7,650.0	7,567.1	49.5	21.3	92.22	-1,845.0	-3,020.6	1,358.9	1,306.0	52.93	25.676	
9,900.0	7,530.0	7,600.0	7,524.9	50.8	21.2	90.42	-1,871.3	-3,025.7	1,374.7	1,320.2	54.46	25.244	
10,000.0	7,530.0	7,579.3	7,506.8	52.2	21.1	89.65	-1,881.1	-3,028.0	1,396.2	1,340.2	56.06	24.904	
10,100.0	7,530.0	7,550.0	7,480.6	53.5	21.0	88.55	-1,893.8	-3,031.3	1,423.7	1,366.1	57.64	24.701	
10,200.0	7,530.0	7,534.8	7,466.8	54.9	21.0	87.97	-1,899.8	-3,033.0	1,456.9	1,397.6	59.26	24.584	
10,300.0	7,530.0	7,517.4	7,450.8	56.3	20.9	87.30	-1,906.3	-3,035.1	1,495.6	1,434.7	60.88	24.567	SF
10,400.0	7,530.0	7,500.0	7,434.5	57.8	20.9	86.62	-1,912.3	-3,037.2	1,539.4	1,476.9	62.48	24.636	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Becky 2F-7H-E168 - Hz - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
6,900.0	6,715.1	9,469.4	7,550.0	29.8	48.7	-15.53	347.8	-2,713.5	1,507.6	1,452.5	55.13	27.345	
6,984.3	6,796.7	9,474.0	7,550.0	30.2	48.7	-15.27	352.4	-2,713.4	1,445.6	1,390.2	55.42	26.082	
7,000.0	6,811.9	9,474.7	7,550.0	30.2	48.8	-9.16	353.1	-2,713.4	1,434.3	1,378.7	55.64	25.776	
7,050.0	6,860.3	9,474.5	7,550.0	30.5	48.8	10.51	352.9	-2,713.4	1,398.9	1,342.5	56.34	24.831	
7,100.0	6,908.6	9,470.9	7,550.0	30.7	48.7	28.63	349.3	-2,713.4	1,364.4	1,307.4	57.03	23.924	
7,150.0	6,956.6	9,463.9	7,550.0	30.9	48.6	43.73	342.2	-2,713.5	1,331.2	1,273.5	57.72	23.066	
7,200.0	7,004.0	9,453.3	7,550.0	31.1	48.4	55.62	331.7	-2,713.6	1,299.5	1,241.2	58.34	22.275	
7,250.0	7,050.6	9,439.4	7,550.0	31.2	48.2	64.79	317.8	-2,713.7	1,269.4	1,210.6	58.86	21.568	
7,300.0	7,096.1	9,422.2	7,550.0	31.4	48.0	71.85	300.6	-2,713.9	1,241.1	1,181.9	59.22	20.958	
7,350.0	7,140.4	9,401.8	7,550.0	31.6	47.7	77.29	280.2	-2,714.1	1,214.8	1,155.4	59.41	20.449	
7,400.0	7,183.1	9,378.2	7,550.0	31.7	47.3	81.48	256.6	-2,714.3	1,190.4	1,131.0	59.40	20.040	
7,450.0	7,224.2	9,351.6	7,550.0	31.8	46.9	84.70	230.0	-2,714.5	1,168.2	1,109.0	59.22	19.727	
7,500.0	7,263.4	9,322.1	7,550.0	32.0	46.5	87.15	200.5	-2,714.8	1,148.0	1,089.2	58.86	19.506	
7,550.0	7,300.5	9,289.9	7,550.0	32.1	46.0	88.99	168.3	-2,715.0	1,130.0	1,071.7	58.34	19.368	
7,600.0	7,335.4	9,255.1	7,550.0	32.2	45.5	90.32	133.5	-2,715.4	1,114.0	1,056.3	57.70	19.309 SF	
7,650.0	7,367.8	9,217.8	7,550.0	32.4	44.9	91.25	96.2	-2,715.7	1,100.1	1,043.1	56.94	19.321	
7,700.0	7,397.6	9,178.4	7,550.0	32.5	44.4	91.86	56.8	-2,716.0	1,088.0	1,031.9	56.09	19.397	
7,750.0	7,424.7	9,136.8	7,550.0	32.6	43.8	92.23	15.2	-2,716.4	1,077.7	1,022.6	55.18	19.532	
7,800.0	7,448.9	9,093.5	7,550.0	32.8	43.2	92.40	-28.1	-2,716.8	1,069.2	1,014.9	54.22	19.718	
7,850.0	7,470.1	9,048.5	7,550.0	32.9	42.5	92.43	-73.1	-2,717.2	1,062.1	1,008.9	53.24	19.951	
7,900.0	7,488.2	9,002.1	7,550.0	33.1	41.9	92.37	-119.5	-2,717.6	1,056.5	1,004.2	52.24	20.225	
7,950.0	7,503.2	8,954.5	7,550.0	33.2	41.2	92.26	-167.1	-2,718.0	1,052.1	1,000.9	51.23	20.536	
8,000.0	7,514.9	8,906.0	7,550.0	33.4	40.5	92.13	-215.6	-2,718.5	1,049.0	998.8	50.24	20.881	
8,050.0	7,523.3	8,856.7	7,550.0	33.6	39.8	92.01	-264.8	-2,718.9	1,046.9	997.7	49.25	21.257	
8,100.0	7,528.3	8,807.0	7,550.0	33.8	39.2	91.92	-314.6	-2,719.3	1,045.9	997.6	48.27	21.666 ES	
8,126.8	7,529.6	8,780.2	7,550.0	33.9	38.8	91.88	-341.4	-2,719.6	1,045.8	998.0	47.76	21.897 CC	
8,149.7	7,530.0	8,757.3	7,550.0	34.0	38.5	91.86	-364.3	-2,719.8	1,045.9	998.6	47.31	22.106	
8,200.0	7,530.0	8,707.1	7,550.0	34.2	37.8	91.86	-414.5	-2,720.2	1,046.3	999.3	46.99	22.268	
8,300.0	7,530.0	8,607.1	7,550.0	34.7	36.5	91.86	-514.5	-2,721.1	1,047.2	1,000.8	46.45	22.544	
8,400.0	7,530.0	8,507.1	7,550.0	35.3	35.3	91.86	-614.5	-2,722.0	1,048.1	1,002.1	46.04	22.764	
8,500.0	7,530.0	8,407.1	7,550.0	35.9	34.1	91.86	-714.5	-2,722.9	1,049.0	1,003.2	45.74	22.932	
8,600.0	7,530.0	8,307.1	7,550.0	36.6	32.9	91.86	-814.5	-2,723.8	1,049.9	1,004.3	45.54	23.053	
8,700.0	7,530.0	8,207.1	7,550.0	37.4	31.8	91.85	-914.5	-2,724.7	1,050.8	1,005.3	45.43	23.129	
8,800.0	7,530.0	8,107.1	7,550.0	38.3	30.7	91.85	-1,014.5	-2,725.6	1,051.7	1,006.2	45.41	23.160	
8,900.0	7,530.0	8,007.1	7,550.0	39.2	29.8	91.85	-1,114.5	-2,726.4	1,052.5	1,007.1	45.47	23.146	
9,000.0	7,530.0	7,924.5	7,546.5	40.1	29.0	91.66	-1,196.9	-2,727.8	1,054.1	1,008.2	45.86	22.983	
9,100.0	7,530.0	7,850.0	7,533.7	41.2	28.3	90.96	-1,270.2	-2,730.8	1,057.8	1,011.3	46.44	22.777	
9,200.0	7,530.0	7,776.8	7,512.2	42.2	27.7	89.79	-1,339.9	-2,735.3	1,064.1	1,017.0	47.12	22.585	
9,300.0	7,530.0	7,711.7	7,485.7	43.3	27.2	88.37	-1,399.2	-2,740.6	1,073.8	1,025.9	47.94	22.398	
9,400.0	7,530.0	7,650.0	7,454.8	44.5	26.7	86.73	-1,452.1	-2,746.7	1,087.6	1,038.7	48.84	22.267	
9,500.0	7,530.0	7,600.0	7,425.6	45.7	26.4	85.21	-1,492.4	-2,752.3	1,106.1	1,056.2	49.90	22.167	
9,600.0	7,530.0	7,550.0	7,393.2	46.9	26.1	83.54	-1,529.9	-2,758.5	1,129.9	1,078.9	50.96	22.172	
9,700.0	7,530.0	7,518.0	7,370.8	48.2	25.9	82.40	-1,552.3	-2,762.8	1,159.1	1,106.9	52.22	22.195	
9,800.0	7,530.0	7,483.8	7,345.5	49.5	25.7	81.14	-1,574.8	-2,767.6	1,193.9	1,140.5	53.45	22.336	
9,900.0	7,530.0	7,450.0	7,319.3	50.8	25.5	79.84	-1,595.5	-2,772.5	1,234.3	1,179.6	54.67	22.575	
10,000.0	7,530.0	7,427.8	7,301.4	52.2	25.3	78.97	-1,608.3	-2,775.9	1,279.8	1,223.8	56.03	22.840	
10,100.0	7,530.0	7,400.0	7,278.3	53.5	25.2	77.87	-1,623.2	-2,780.2	1,330.4	1,273.1	57.30	23.217	
10,200.0	7,530.0	7,384.4	7,265.1	54.9	25.1	77.24	-1,631.1	-2,782.6	1,385.4	1,326.7	58.73	23.589	
10,300.0	7,530.0	7,366.3	7,249.5	56.3	25.0	76.51	-1,639.8	-2,785.6	1,444.7	1,384.5	60.11	24.032	
10,400.0	7,530.0	7,350.0	7,235.2	57.8	24.9	75.85	-1,647.2	-2,788.2	1,507.7	1,446.2	61.51	24.512	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Becky 2G-7H-E168 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
6,800.0	6,618.3	9,835.9	7,803.0	29.3	51.1	-20.10	322.7	-2,425.7	1,550.0	1,496.4	53.58	28.929	
6,900.0	6,715.1	9,841.8	7,803.0	29.8	51.2	-19.60	328.5	-2,425.7	1,460.2	1,406.2	54.02	27.032	
6,984.3	6,796.7	9,846.7	7,803.0	30.2	51.3	-19.18	333.5	-2,425.8	1,385.6	1,331.2	54.38	25.478	
7,000.0	6,811.9	9,847.4	7,803.0	30.2	51.3	-12.06	334.2	-2,425.8	1,371.9	1,316.9	54.92	24.981	
7,050.0	6,860.3	9,847.5	7,803.0	30.5	51.3	10.77	334.3	-2,425.8	1,328.2	1,271.6	56.63	23.454	
7,100.0	6,908.6	9,844.1	7,803.0	30.7	51.2	31.78	330.9	-2,425.7	1,285.1	1,226.6	58.46	21.982	
7,150.0	6,956.6	9,837.3	7,803.0	30.9	51.1	49.41	324.0	-2,425.7	1,242.8	1,182.4	60.34	20.594	
7,200.0	7,004.0	9,826.9	7,803.0	31.1	51.0	63.43	313.7	-2,425.6	1,201.5	1,139.4	62.08	19.353	
7,250.0	7,050.6	9,813.3	7,803.0	31.2	50.8	74.37	300.0	-2,425.5	1,161.5	1,098.0	63.49	18.294	
7,300.0	7,096.1	9,796.2	7,803.0	31.4	50.6	82.88	283.0	-2,425.3	1,123.0	1,058.5	64.47	17.417	
7,350.0	7,140.4	9,776.0	7,803.0	31.6	50.3	89.52	262.8	-2,425.2	1,086.1	1,021.1	65.02	16.704	
7,400.0	7,183.1	9,752.6	7,803.0	31.7	50.0	94.72	239.4	-2,425.0	1,051.2	986.0	65.17	16.131	
7,450.0	7,224.2	9,726.2	7,803.0	31.8	49.6	98.79	213.0	-2,424.7	1,018.2	953.3	64.94	15.679	
7,500.0	7,263.4	9,696.9	7,803.0	32.0	49.2	101.97	183.6	-2,424.5	987.5	923.1	64.41	15.332	
7,550.0	7,300.5	9,664.8	7,803.0	32.1	48.7	104.45	151.6	-2,424.2	959.0	895.4	63.60	15.079	
7,600.0	7,335.4	9,630.1	7,803.0	32.2	48.3	106.35	116.9	-2,423.9	932.8	870.3	62.56	14.910	
7,650.0	7,367.8	9,593.0	7,803.0	32.4	47.8	107.79	79.8	-2,423.6	909.1	847.7	61.34	14.820	
7,700.0	7,397.6	9,553.7	7,803.0	32.5	47.2	108.86	40.5	-2,423.3	887.7	827.8	59.96	14.805	SF
7,750.0	7,424.7	9,512.3	7,803.0	32.6	46.7	109.63	-0.9	-2,422.9	868.8	810.3	58.46	14.861	
7,800.0	7,448.9	9,469.1	7,803.0	32.8	46.1	110.17	-44.1	-2,422.5	852.3	795.4	56.87	14.985	
7,850.0	7,470.1	9,424.2	7,803.0	32.9	45.5	110.52	-89.0	-2,422.1	838.1	782.8	55.21	15.179	
7,900.0	7,488.2	9,377.9	7,803.0	33.1	44.9	110.75	-135.3	-2,421.8	826.1	772.6	53.50	15.440	
7,950.0	7,503.2	9,330.3	7,803.0	33.2	44.3	110.88	-182.9	-2,421.3	816.4	764.6	51.76	15.772	
8,000.0	7,514.9	9,281.9	7,803.0	33.4	43.7	110.95	-231.3	-2,420.9	808.8	758.8	50.00	16.177	
8,050.0	7,523.3	9,232.7	7,803.0	33.6	43.1	111.00	-280.5	-2,420.5	803.4	755.1	48.23	16.658	
8,100.0	7,528.3	9,182.9	7,803.0	33.8	42.5	111.03	-330.3	-2,420.1	799.9	753.5	46.45	17.221	
8,149.7	7,530.0	9,133.3	7,803.0	34.0	41.9	111.06	-379.9	-2,419.7	798.5	753.9	44.69	17.868	
8,200.0	7,530.0	9,083.0	7,803.0	34.2	41.3	111.08	-430.2	-2,419.2	798.1	753.7	44.42	17.970	
8,300.0	7,530.0	8,983.0	7,803.0	34.7	40.1	111.10	-530.2	-2,418.4	797.3	753.4	43.97	18.134	
8,400.0	7,530.0	8,883.0	7,803.0	35.3	39.0	111.12	-630.2	-2,417.5	796.5	752.9	43.64	18.253	
8,500.0	7,530.0	8,783.0	7,803.0	35.9	38.0	111.14	-730.2	-2,416.7	795.7	752.3	43.41	18.330	
8,600.0	7,530.0	8,683.0	7,803.0	36.6	37.0	111.16	-830.2	-2,415.8	794.9	751.7	43.28	18.367	
8,700.0	7,530.0	8,583.0	7,803.0	37.4	36.0	111.19	-930.2	-2,414.9	794.1	750.9	43.23	18.369	
8,800.0	7,530.0	8,483.0	7,803.0	38.3	35.1	111.21	-1,030.2	-2,414.1	793.3	750.1	43.27	18.334	
8,900.0	7,530.0	8,383.0	7,803.0	39.2	34.3	111.23	-1,130.1	-2,413.2	792.5	749.2	43.39	18.264	
9,000.0	7,530.0	8,276.7	7,802.4	40.1	33.5	111.21	-1,236.4	-2,412.4	791.7	748.1	43.54	18.184	
9,100.0	7,530.0	8,148.9	7,782.8	41.2	32.6	109.81	-1,362.5	-2,415.3	788.3	744.4	43.86	17.974	
9,200.0	7,530.0	8,034.8	7,742.5	42.2	31.9	106.85	-1,468.8	-2,422.4	782.7	737.9	44.78	17.477	
9,300.0	7,530.0	7,939.6	7,693.7	43.3	31.3	103.21	-1,549.9	-2,431.4	777.9	731.8	46.07	16.884	
9,368.0	7,530.0	7,885.6	7,660.3	44.1	31.0	100.71	-1,591.8	-2,437.7	776.7	729.6	47.05	16.509	CC
9,400.0	7,530.0	7,862.9	7,645.2	44.5	30.9	99.57	-1,608.5	-2,440.5	777.0	729.5	47.51	16.354	ES
9,500.0	7,530.0	7,800.0	7,600.0	45.7	30.6	96.19	-1,651.3	-2,449.1	782.6	733.6	48.98	15.976	
9,600.0	7,530.0	7,750.0	7,560.9	46.9	30.3	93.29	-1,681.6	-2,456.7	796.3	745.8	50.45	15.782	
9,700.0	7,530.0	7,714.0	7,531.3	48.2	30.2	91.11	-1,701.2	-2,462.4	818.9	766.9	51.94	15.765	
9,800.0	7,530.0	7,682.0	7,504.0	49.5	30.0	89.13	-1,717.0	-2,467.7	850.6	797.1	53.42	15.922	
9,900.0	7,530.0	7,650.0	7,475.8	50.8	29.9	87.12	-1,731.2	-2,473.2	890.9	836.0	54.85	16.241	
10,000.0	7,530.0	7,633.4	7,461.0	52.2	29.8	86.07	-1,737.9	-2,476.1	938.9	882.6	56.38	16.653	
10,100.0	7,530.0	7,614.7	7,443.9	53.5	29.7	84.88	-1,745.0	-2,479.4	994.0	936.1	57.88	17.174	
10,200.0	7,530.0	7,600.0	7,430.4	54.9	29.6	83.95	-1,750.2	-2,482.0	1,055.1	995.7	59.40	17.764	
10,300.0	7,530.0	7,584.8	7,416.3	56.3	29.6	82.99	-1,755.1	-2,484.8	1,121.3	1,060.4	60.90	18.412	
10,400.0	7,530.0	7,572.7	7,405.0	57.8	29.5	82.22	-1,758.8	-2,487.0	1,192.0	1,129.5	62.43	19.093	
10,500.0	7,530.0	7,550.0	7,383.6	59.2	29.4	80.79	-1,765.0	-2,491.2	1,266.4	1,202.6	63.80	19.850	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Becky 2G-7H-E168 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
10,600.0	7,530.0	7,550.0	7,383.6	60.7	29.4	80.79	-1,765.0	-2,491.2	1,343.7	1,278.3	65.47	20.524	
10,700.0	7,530.0	7,550.0	7,383.6	62.2	29.4	80.79	-1,765.0	-2,491.2	1,423.9	1,356.7	67.15	21.205	
10,800.0	7,530.0	7,550.0	7,383.6	63.7	29.4	80.79	-1,765.0	-2,491.2	1,506.4	1,437.5	68.83	21.887	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Becky 2H-7H-E168 - Hz - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
6,400.0	6,231.2	9,757.7	7,550.0	27.3	53.3	-32.95	233.9	-2,121.0	1,544.1	1,497.9	46.27	33.372	
6,500.0	6,328.0	9,765.7	7,550.0	27.8	53.4	-31.97	241.9	-2,121.8	1,448.8	1,401.8	47.01	30.820	
6,600.0	6,424.8	9,773.7	7,550.0	28.3	53.5	-30.99	249.8	-2,122.5	1,354.1	1,306.4	47.74	28.363	
6,700.0	6,521.5	9,781.6	7,550.0	28.8	53.6	-30.00	257.7	-2,123.3	1,260.2	1,211.7	48.47	25.999	
6,800.0	6,618.3	9,789.6	7,550.0	29.3	53.7	-29.00	265.7	-2,124.0	1,167.2	1,118.0	49.19	23.728	
6,900.0	6,715.1	9,797.6	7,550.0	29.8	53.8	-28.00	273.6	-2,124.8	1,075.4	1,025.5	49.91	21.549	
6,984.3	6,796.7	9,804.3	7,550.0	30.2	53.9	-27.15	280.3	-2,125.4	999.2	948.7	50.50	19.785	
7,000.0	6,811.9	9,805.3	7,550.0	30.2	53.9	-19.78	281.3	-2,125.5	985.2	933.9	51.29	19.206	
7,050.0	6,860.3	9,806.5	7,550.0	30.5	53.9	3.88	282.5	-2,125.7	940.5	886.8	53.77	17.491	
7,100.0	6,908.6	9,804.2	7,550.0	30.7	53.9	25.68	280.2	-2,125.4	896.3	840.1	56.21	15.946	
7,150.0	6,956.6	9,798.4	7,550.0	30.9	53.8	43.92	274.4	-2,124.9	852.8	794.2	58.60	14.554	
7,200.0	7,004.0	9,789.2	7,550.0	31.1	53.7	58.34	265.3	-2,124.0	810.3	749.6	60.79	13.330	
7,250.0	7,050.6	9,776.6	7,550.0	31.2	53.5	69.45	252.7	-2,122.8	769.1	706.5	62.59	12.288	
7,300.0	7,096.1	9,760.7	7,550.0	31.4	53.4	77.92	236.9	-2,121.3	729.4	665.5	63.87	11.419	
7,350.0	7,140.4	9,741.5	7,550.0	31.6	53.1	84.35	217.8	-2,119.4	691.4	626.7	64.62	10.700	
7,400.0	7,183.1	9,719.1	7,550.0	31.7	52.9	89.16	195.5	-2,117.3	655.3	590.5	64.86	10.104	
7,450.0	7,224.2	9,693.8	7,550.0	31.8	52.6	92.71	170.3	-2,114.9	621.5	556.8	64.66	9.611	
7,500.0	7,263.4	9,665.4	7,550.0	32.0	52.2	95.24	142.1	-2,112.2	590.0	525.9	64.10	9.204	
7,550.0	7,300.5	9,634.3	7,550.0	32.1	51.9	96.95	111.1	-2,109.2	561.0	497.7	63.23	8.871	
7,600.0	7,335.4	9,600.6	7,550.0	32.2	51.5	97.98	77.5	-2,106.0	534.5	472.3	62.13	8.603	
7,650.0	7,367.8	9,564.4	7,550.0	32.4	51.1	98.46	41.5	-2,102.5	510.6	449.7	60.85	8.391	
7,700.0	7,397.6	9,525.9	7,550.0	32.5	50.6	98.51	3.2	-2,098.8	489.2	429.8	59.44	8.230	
7,750.0	7,424.7	9,485.3	7,550.0	32.6	50.2	98.22	-37.2	-2,094.9	470.3	412.4	57.96	8.115	
7,800.0	7,448.9	9,442.8	7,550.0	32.8	49.7	97.70	-79.6	-2,090.9	453.8	397.4	56.45	8.039	
7,850.0	7,470.1	9,398.6	7,550.0	32.9	49.2	97.04	-123.6	-2,086.6	439.5	384.5	54.95	7.998	
7,900.0	7,488.2	9,352.9	7,550.0	33.1	48.7	96.34	-169.1	-2,082.2	427.1	373.6	53.48	7.986	
7,950.0	7,503.2	9,305.9	7,550.0	33.2	48.3	95.68	-215.8	-2,077.8	416.4	364.4	52.06	8.000	
8,000.0	7,514.9	9,257.9	7,550.0	33.4	47.8	95.16	-263.6	-2,073.2	407.3	356.6	50.69	8.035	
8,050.0	7,523.3	9,209.1	7,550.0	33.6	47.3	94.84	-312.2	-2,068.5	399.6	350.2	49.37	8.094	
8,100.0	7,528.3	9,159.7	7,550.0	33.8	46.8	94.79	-361.3	-2,063.8	393.1	345.0	48.08	8.176	
8,149.7	7,530.0	9,110.3	7,550.0	34.0	46.3	95.05	-410.5	-2,059.0	387.8	341.0	46.78	8.291	
8,200.0	7,530.0	9,060.3	7,550.0	34.2	45.9	95.12	-460.3	-2,054.3	383.0	336.6	46.47	8.243	
8,300.0	7,530.0	8,960.7	7,550.0	34.7	45.0	95.25	-559.4	-2,044.7	373.5	327.5	45.96	8.127	
8,400.0	7,530.0	8,861.2	7,550.0	35.3	44.1	95.38	-658.5	-2,035.2	364.0	318.4	45.58	7.986	
8,500.0	7,530.0	8,761.6	7,550.0	35.9	43.3	95.53	-757.6	-2,025.7	354.4	309.1	45.31	7.823	
8,600.0	7,530.0	8,662.1	7,550.0	36.6	42.6	95.68	-856.7	-2,016.2	344.9	299.8	45.14	7.641	
8,700.0	7,530.0	8,562.6	7,550.0	37.4	41.9	95.84	-955.7	-2,006.6	335.4	290.3	45.07	7.442	
8,800.0	7,530.0	8,463.0	7,550.0	38.3	41.3	96.02	-1,054.8	-1,997.1	325.9	280.8	45.08	7.228	
8,900.0	7,530.0	8,363.5	7,550.0	39.2	40.8	96.20	-1,153.9	-1,987.6	316.4	271.2	45.19	7.000	
9,000.0	7,530.0	8,263.9	7,550.0	40.1	40.3	96.39	-1,253.0	-1,978.1	306.8	261.4	45.40	6.759	
9,100.0	7,530.0	8,165.2	7,549.9	41.2	40.0	96.58	-1,351.3	-1,968.6	297.3	251.6	45.71	6.505	
9,200.0	7,530.0	8,075.0	7,541.9	42.2	39.6	95.15	-1,440.9	-1,962.5	289.7	243.4	46.32	6.254	
9,300.0	7,530.0	7,988.6	7,521.8	43.3	39.3	91.16	-1,524.7	-1,960.8	286.3	239.2	47.09	6.081	
9,304.2	7,530.0	7,985.1	7,520.7	43.4	39.3	90.94	-1,528.0	-1,960.8	286.3	239.2	47.12	6.076	CC, ES, SF
9,400.0	7,530.0	7,909.5	7,493.0	44.5	39.0	85.43	-1,598.3	-1,962.7	290.3	242.5	47.74	6.080	
9,500.0	7,530.0	7,839.2	7,459.5	45.7	38.8	79.08	-1,659.9	-1,967.3	304.9	256.9	48.07	6.343	
9,600.0	7,530.0	7,778.2	7,424.9	46.9	38.6	73.05	-1,709.8	-1,973.3	332.6	284.5	48.10	6.914	
9,700.0	7,530.0	7,725.8	7,391.4	48.2	38.4	67.81	-1,749.4	-1,980.0	373.2	325.2	47.98	7.779	
9,800.0	7,530.0	7,681.1	7,360.2	49.5	38.2	63.48	-1,780.7	-1,986.8	425.4	377.5	47.86	8.888	
9,900.0	7,530.0	7,650.0	7,337.2	50.8	38.1	60.61	-1,800.9	-1,992.0	486.9	438.8	48.11	10.121	
10,000.0	7,530.0	7,600.0	7,298.1	52.2	37.8	56.32	-1,830.8	-2,001.4	555.7	508.2	47.52	11.693	
10,100.0	7,530.0	7,582.0	7,283.5	53.5	37.8	54.88	-1,840.6	-2,005.0	629.9	581.7	48.16	13.078	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Becky 2H-7H-E168 - Hz - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
10,200.0	7,530.0	7,550.0	7,256.9	54.9	37.6	52.47	-1,857.0	-2,011.8	708.7	660.5	48.21	14.701	
10,300.0	7,530.0	7,550.0	7,256.9	56.3	37.6	52.47	-1,857.0	-2,011.8	790.9	741.4	49.52	15.971	
10,400.0	7,530.0	7,517.6	7,229.1	57.8	37.5	50.22	-1,872.0	-2,019.1	875.4	825.9	49.50	17.686	
10,500.0	7,530.0	7,500.0	7,213.7	59.2	37.4	49.07	-1,879.4	-2,023.2	962.3	912.2	50.06	19.224	
10,600.0	7,530.0	7,500.0	7,213.7	60.7	37.4	49.07	-1,879.4	-2,023.2	1,051.1	999.8	51.33	20.480	
10,700.0	7,530.0	7,473.4	7,190.1	62.2	37.3	47.45	-1,889.7	-2,029.6	1,140.9	1,089.4	51.49	22.160	
10,800.0	7,530.0	7,450.0	7,168.9	63.7	37.2	46.12	-1,897.9	-2,035.4	1,232.3	1,180.5	51.77	23.803	
10,900.0	7,530.0	7,450.0	7,168.9	65.2	37.2	46.12	-1,897.9	-2,035.4	1,324.3	1,271.3	52.99	24.991	
11,000.0	7,530.0	7,450.0	7,168.9	66.7	37.2	46.12	-1,897.9	-2,035.4	1,417.3	1,363.1	54.21	26.144	
11,100.0	7,530.0	7,450.0	7,168.9	68.3	37.2	46.12	-1,897.9	-2,035.4	1,511.3	1,455.9	55.44	27.262	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Sosa 2E-7H-E168 - HZ - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
9,200.0	7,530.0	7,794.6	7,644.6	42.2	20.6	94.90	-1,588.5	-3,209.2	1,549.1	1,504.7	44.45	34.853	
9,300.0	7,530.0	7,868.7	7,684.9	43.3	20.5	96.43	-1,649.9	-3,199.4	1,539.8	1,494.1	45.65	33.727	
9,400.0	7,530.0	7,955.9	7,721.7	44.5	20.5	97.85	-1,728.1	-3,189.0	1,532.4	1,485.5	46.89	32.680	
9,500.0	7,530.0	8,054.8	7,748.6	45.7	20.5	98.90	-1,822.6	-3,178.8	1,525.8	1,477.5	48.27	31.608	
9,600.0	7,530.0	8,161.1	7,759.0	46.9	20.7	99.34	-1,927.9	-3,170.0	1,519.2	1,469.3	49.93	30.427	
9,700.0	7,530.0	8,261.1	7,759.0	48.2	21.0	99.38	-2,027.7	-3,163.1	1,512.3	1,460.4	51.87	29.156	
9,800.0	7,530.0	8,360.9	7,759.0	49.5	21.4	99.43	-2,127.2	-3,156.1	1,505.4	1,451.5	53.99	27.885	
9,900.0	7,530.0	8,460.6	7,759.0	50.8	22.0	99.47	-2,226.7	-3,149.2	1,498.6	1,442.3	56.27	26.631	
10,000.0	7,530.0	8,540.8	7,759.0	52.2	22.5	99.50	-2,306.7	-3,144.1	1,492.3	1,433.8	58.58	25.476	
10,100.0	7,530.0	8,620.3	7,759.0	53.5	23.1	99.53	-2,386.1	-3,140.2	1,487.5	1,426.5	60.95	24.404	
10,200.0	7,530.0	8,700.0	7,759.0	54.9	23.8	99.54	-2,465.8	-3,137.3	1,484.0	1,420.6	63.41	23.403	
10,300.0	7,530.0	8,779.5	7,759.0	56.3	24.5	99.56	-2,545.3	-3,135.6	1,481.8	1,415.9	65.95	22.469	
10,400.0	7,530.0	8,864.6	7,759.0	57.8	25.3	99.56	-2,630.4	-3,135.0	1,481.1	1,412.5	68.61	21.587	
10,428.3	7,530.0	8,886.2	7,759.0	58.2	25.5	99.56	-2,651.9	-3,135.0	1,481.1	1,411.7	69.35	21.358	CC
10,500.0	7,530.0	8,957.8	7,759.0	59.2	26.2	99.56	-2,723.6	-3,135.0	1,481.1	1,409.6	71.45	20.730	
10,600.0	7,530.0	9,057.8	7,759.0	60.7	27.3	99.56	-2,823.6	-3,135.0	1,481.1	1,406.7	74.43	19.900	
10,700.0	7,530.0	9,157.8	7,759.0	62.2	28.4	99.56	-2,923.6	-3,135.0	1,481.1	1,403.7	77.46	19.120	
10,800.0	7,530.0	9,257.8	7,759.0	63.7	29.6	99.56	-3,023.6	-3,135.1	1,481.1	1,400.6	80.55	18.387	
10,900.0	7,530.0	9,357.8	7,759.0	65.2	30.9	99.56	-3,123.6	-3,135.1	1,481.1	1,397.5	83.68	17.701	
11,000.0	7,530.0	9,446.9	7,759.0	66.7	32.0	99.56	-3,212.6	-3,135.5	1,481.7	1,395.0	86.68	17.093	
11,100.0	7,530.0	9,546.9	7,759.0	68.3	33.4	99.55	-3,312.6	-3,136.3	1,482.4	1,392.5	89.87	16.494	
11,200.0	7,530.0	9,646.9	7,759.0	69.8	34.7	99.55	-3,412.6	-3,137.1	1,483.2	1,390.1	93.09	15.932	
11,300.0	7,530.0	9,746.9	7,759.0	71.4	36.1	99.54	-3,512.6	-3,137.8	1,483.9	1,387.6	96.33	15.404	
11,400.0	7,530.0	9,846.9	7,759.0	72.9	37.6	99.54	-3,612.6	-3,138.6	1,484.7	1,385.1	99.60	14.907	
11,500.0	7,530.0	9,946.9	7,759.0	74.5	39.0	99.53	-3,712.6	-3,139.4	1,485.4	1,382.6	102.87	14.439	
11,600.0	7,530.0	10,046.9	7,759.0	76.1	40.5	99.53	-3,812.6	-3,140.1	1,486.2	1,380.0	106.17	13.999	
11,700.0	7,530.0	10,146.8	7,759.0	77.7	42.0	99.52	-3,912.6	-3,140.9	1,486.9	1,377.5	109.47	13.583	
11,800.0	7,530.0	10,246.8	7,759.0	79.3	43.6	99.52	-4,012.6	-3,141.7	1,487.7	1,374.9	112.79	13.190	
11,900.0	7,530.0	10,346.8	7,759.0	80.9	45.1	99.51	-4,112.6	-3,142.4	1,488.5	1,372.3	116.12	12.818	
12,000.0	7,530.0	10,446.8	7,759.0	82.5	46.7	99.51	-4,212.6	-3,143.2	1,489.2	1,369.8	119.46	12.466	
12,100.0	7,530.0	10,546.8	7,759.0	84.1	48.2	99.50	-4,312.6	-3,144.0	1,490.0	1,367.2	122.81	12.132	
12,200.0	7,530.0	10,646.8	7,759.0	85.7	49.8	99.50	-4,412.6	-3,144.7	1,490.7	1,364.6	126.16	11.816	
12,300.0	7,530.0	10,746.8	7,759.0	87.3	51.4	99.49	-4,512.5	-3,145.5	1,491.5	1,362.0	129.53	11.515	
12,400.0	7,530.0	10,846.8	7,759.0	89.0	53.0	99.49	-4,612.5	-3,146.3	1,492.2	1,359.3	132.89	11.229	
12,500.0	7,530.0	10,946.8	7,759.0	90.6	54.6	99.48	-4,712.5	-3,147.0	1,493.0	1,356.7	136.27	10.956	
12,600.0	7,530.0	11,046.8	7,759.0	92.2	56.2	99.48	-4,812.5	-3,147.8	1,493.8	1,354.1	139.65	10.697	
12,700.0	7,530.0	11,146.8	7,759.0	93.9	57.9	99.47	-4,912.5	-3,148.6	1,494.5	1,351.5	143.03	10.449	
12,800.0	7,530.0	11,246.8	7,759.0	95.5	59.5	99.47	-5,012.5	-3,149.3	1,495.3	1,348.8	146.42	10.212	
12,900.0	7,530.0	11,346.8	7,759.0	97.2	61.1	99.46	-5,112.5	-3,150.1	1,496.0	1,346.2	149.81	9.986	
13,000.0	7,530.0	11,446.8	7,759.0	98.8	62.8	99.46	-5,212.5	-3,150.9	1,496.8	1,343.6	153.21	9.769	
13,100.0	7,530.0	11,546.8	7,759.0	100.5	64.4	99.45	-5,312.5	-3,151.6	1,497.5	1,340.9	156.61	9.562	
13,200.0	7,530.0	11,646.8	7,759.0	102.1	66.1	99.45	-5,412.5	-3,152.4	1,498.3	1,338.3	160.01	9.364	
13,300.0	7,530.0	11,746.8	7,759.0	103.8	67.8	99.44	-5,512.5	-3,153.2	1,499.0	1,335.6	163.42	9.173	
13,400.0	7,530.0	11,846.8	7,759.0	105.5	69.4	99.44	-5,612.5	-3,153.9	1,499.8	1,333.0	166.83	8.990	
13,500.0	7,530.0	11,946.8	7,759.0	107.1	71.1	99.43	-5,712.5	-3,154.7	1,500.6	1,330.3	170.24	8.815	
13,600.0	7,530.0	12,046.8	7,759.0	108.8	72.8	99.43	-5,812.5	-3,155.5	1,501.3	1,327.7	173.65	8.646	
13,700.0	7,530.0	12,146.8	7,759.0	110.5	74.5	99.43	-5,912.5	-3,156.2	1,502.1	1,325.0	177.07	8.483	
13,800.0	7,530.0	12,246.8	7,759.0	112.2	76.1	99.42	-6,012.5	-3,157.0	1,502.8	1,322.3	180.48	8.327	
13,900.0	7,530.0	12,346.8	7,759.0	113.9	77.8	99.42	-6,112.5	-3,157.8	1,503.6	1,319.7	183.90	8.176	
14,000.0	7,530.0	12,446.8	7,759.0	115.5	79.5	99.41	-6,212.4	-3,158.5	1,504.3	1,317.0	187.33	8.031	
14,100.0	7,530.0	12,546.8	7,759.0	117.2	81.2	99.41	-6,312.4	-3,159.3	1,505.1	1,314.3	190.75	7.890	
14,200.0	7,530.0	12,646.8	7,759.0	118.9	82.9	99.40	-6,412.4	-3,160.1	1,505.8	1,311.7	194.18	7.755	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Sosa 2E-7H-E168 - HZ - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
14,300.0	7,530.0	12,746.8	7,759.0	120.6	84.6	99.40	-6,512.4	-3,160.8	1,506.6	1,309.0	197.60	7.624	
14,400.0	7,530.0	12,846.8	7,759.0	122.3	86.3	99.39	-6,612.4	-3,161.6	1,507.4	1,306.3	201.03	7.498	
14,500.0	7,530.0	12,946.8	7,759.0	124.0	88.0	99.39	-6,712.4	-3,162.4	1,508.1	1,303.7	204.46	7.376	
14,600.0	7,530.0	13,046.8	7,759.0	125.7	89.7	99.38	-6,812.4	-3,163.1	1,508.9	1,301.0	207.89	7.258	
14,700.0	7,530.0	13,146.8	7,759.0	127.4	91.4	99.38	-6,912.4	-3,163.9	1,509.6	1,298.3	211.32	7.144	
14,800.0	7,530.0	13,246.8	7,759.0	129.1	93.1	99.37	-7,012.4	-3,164.7	1,510.4	1,295.6	214.76	7.033	
14,900.0	7,530.0	13,346.8	7,759.0	130.8	94.8	99.37	-7,112.4	-3,165.4	1,511.1	1,292.9	218.19	6.926	
15,000.0	7,530.0	13,446.8	7,759.0	132.5	96.5	99.36	-7,212.4	-3,166.2	1,511.9	1,290.3	221.63	6.822	
15,100.0	7,530.0	13,546.7	7,759.0	134.2	98.3	99.36	-7,312.4	-3,167.0	1,512.7	1,287.6	225.06	6.721	
15,200.0	7,530.0	13,646.7	7,759.0	135.9	100.0	99.35	-7,412.4	-3,167.7	1,513.4	1,284.9	228.50	6.623	
15,300.0	7,530.0	13,746.7	7,759.0	137.6	101.7	99.35	-7,512.4	-3,168.5	1,514.2	1,282.2	231.94	6.528	
15,400.0	7,530.0	13,846.7	7,759.0	139.3	103.4	99.35	-7,612.4	-3,169.3	1,514.9	1,279.5	235.38	6.436	
15,500.0	7,530.0	13,946.7	7,759.0	141.0	105.1	99.34	-7,712.4	-3,170.0	1,515.7	1,276.9	238.82	6.347	
15,600.0	7,530.0	14,046.7	7,759.0	142.7	106.8	99.34	-7,812.4	-3,170.8	1,516.4	1,274.2	242.26	6.259	
15,700.0	7,530.0	14,146.7	7,759.0	144.4	108.6	99.33	-7,912.3	-3,171.6	1,517.2	1,271.5	245.70	6.175	
15,800.0	7,530.0	14,246.7	7,759.0	146.1	110.3	99.33	-8,012.3	-3,172.3	1,517.9	1,268.8	249.15	6.093	
15,900.0	7,530.0	14,346.7	7,759.0	147.8	112.0	99.32	-8,112.3	-3,173.1	1,518.7	1,266.1	252.59	6.012	
16,000.0	7,530.0	14,446.7	7,759.0	149.5	113.7	99.32	-8,212.3	-3,173.9	1,519.5	1,263.4	256.04	5.935	
16,100.0	7,530.0	14,546.7	7,759.0	151.2	115.4	99.31	-8,312.3	-3,174.6	1,520.2	1,260.7	259.48	5.859	
16,200.0	7,530.0	14,646.7	7,759.0	153.0	117.2	99.31	-8,412.3	-3,175.4	1,521.0	1,258.0	262.93	5.785	
16,300.0	7,530.0	14,746.7	7,759.0	154.7	118.9	99.30	-8,512.3	-3,176.2	1,521.7	1,255.4	266.37	5.713	
16,400.0	7,530.0	14,846.7	7,759.0	156.4	120.6	99.30	-8,612.3	-3,176.9	1,522.5	1,252.7	269.82	5.643	
16,500.0	7,530.0	14,946.7	7,759.0	158.1	122.4	99.29	-8,712.3	-3,177.7	1,523.2	1,250.0	273.27	5.574	
16,600.0	7,530.0	15,046.7	7,759.0	159.8	124.1	99.29	-8,812.3	-3,178.5	1,524.0	1,247.3	276.72	5.507	
16,700.0	7,530.0	15,146.7	7,759.0	161.5	125.8	99.28	-8,912.3	-3,179.2	1,524.8	1,244.6	280.16	5.442	
16,800.0	7,530.0	15,246.7	7,759.0	163.3	127.5	99.28	-9,012.3	-3,180.0	1,525.5	1,241.9	283.61	5.379	
16,900.0	7,530.0	15,346.7	7,759.0	165.0	129.3	99.28	-9,112.3	-3,180.8	1,526.3	1,239.2	287.06	5.317	
17,000.0	7,530.0	15,446.7	7,759.0	166.7	131.0	99.27	-9,212.3	-3,181.5	1,527.0	1,236.5	290.51	5.256	
17,100.0	7,530.0	15,546.7	7,759.0	168.4	132.7	99.27	-9,312.3	-3,182.3	1,527.8	1,233.8	293.96	5.197	
17,200.0	7,530.0	15,646.7	7,759.0	170.1	134.5	99.26	-9,412.3	-3,183.1	1,528.5	1,231.1	297.42	5.139	
17,300.0	7,530.0	15,746.7	7,759.0	171.9	136.2	99.26	-9,512.3	-3,183.8	1,529.3	1,228.4	300.87	5.083	
17,400.0	7,530.0	15,846.7	7,759.0	173.6	137.9	99.25	-9,612.2	-3,184.6	1,530.0	1,225.7	304.32	5.028	
17,500.0	7,530.0	15,946.7	7,759.0	175.3	139.7	99.25	-9,712.2	-3,185.4	1,530.8	1,223.0	307.77	4.974	
17,589.7	7,530.0	16,036.2	7,759.0	176.9	141.2	99.24	-9,801.7	-3,186.0	1,531.5	1,220.6	310.87	4.927	ES, SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Sosa 2F-7H-E168 - HZ - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
8,300.0	7,530.0	7,500.0	7,379.2	34.7	25.6	83.77	-1,388.7	-2,899.7	1,505.7	1,472.5	33.22	45.320	
8,400.0	7,530.0	7,528.2	7,405.2	35.3	25.6	84.96	-1,398.6	-2,895.3	1,449.9	1,415.6	34.33	42.229	
8,500.0	7,530.0	7,550.0	7,425.0	35.9	25.6	85.87	-1,407.1	-2,891.9	1,398.8	1,363.3	35.54	39.358	
8,600.0	7,530.0	7,550.0	7,425.0	36.6	25.6	85.87	-1,407.1	-2,891.9	1,352.8	1,315.9	36.85	36.706	
8,700.0	7,530.0	7,584.8	7,455.9	37.4	25.6	87.30	-1,422.3	-2,886.6	1,311.9	1,273.7	38.15	34.387	
8,800.0	7,530.0	7,600.0	7,469.1	38.3	25.6	87.92	-1,429.5	-2,884.3	1,276.8	1,237.3	39.54	32.293	
8,900.0	7,530.0	7,650.0	7,511.0	39.2	25.6	89.91	-1,455.7	-2,877.2	1,247.6	1,206.8	40.84	30.553	
9,000.0	7,530.0	7,675.6	7,531.6	40.1	25.6	90.89	-1,470.6	-2,873.7	1,224.4	1,182.2	42.23	28.992	
9,100.0	7,530.0	7,718.3	7,564.4	41.2	25.6	92.46	-1,497.3	-2,868.1	1,207.2	1,163.6	43.56	27.711	
9,200.0	7,530.0	7,769.8	7,601.2	42.2	25.5	94.25	-1,532.8	-2,861.8	1,195.5	1,150.7	44.84	26.660	
9,300.0	7,530.0	7,832.0	7,641.2	43.3	25.5	96.20	-1,579.8	-2,854.9	1,188.7	1,142.6	46.06	25.809	
9,400.0	7,530.0	7,906.7	7,682.3	44.5	25.4	98.21	-1,641.7	-2,847.9	1,185.7	1,138.5	47.22	25.112	
9,478.6	7,530.0	7,974.7	7,712.5	45.4	25.3	99.69	-1,702.4	-2,842.7	1,185.1	1,137.0	48.14	24.621	CC
9,500.0	7,530.0	7,994.6	7,720.0	45.7	25.3	100.06	-1,720.8	-2,841.5	1,185.2	1,136.8	48.39	24.492	
9,600.0	7,530.0	8,094.5	7,747.8	46.9	25.3	101.42	-1,816.5	-2,836.7	1,185.7	1,136.0	49.71	23.851	
9,700.0	7,530.0	8,201.8	7,759.0	48.2	25.4	101.97	-1,923.1	-2,834.8	1,186.1	1,134.8	51.34	23.101	
9,800.0	7,530.0	8,302.4	7,759.0	49.5	25.5	101.97	-2,023.6	-2,834.8	1,186.1	1,132.9	53.27	22.267	
9,900.0	7,530.0	8,402.4	7,759.0	50.8	25.8	101.97	-2,123.6	-2,834.8	1,186.1	1,130.8	55.39	21.416	
10,000.0	7,530.0	8,502.4	7,759.0	52.2	26.2	101.97	-2,223.6	-2,834.9	1,186.2	1,128.5	57.68	20.563	
10,100.0	7,530.0	8,602.4	7,759.0	53.5	26.7	101.97	-2,323.6	-2,834.9	1,186.2	1,126.0	60.14	19.724	
10,200.0	7,530.0	8,702.4	7,759.0	54.9	27.3	101.97	-2,423.6	-2,834.9	1,186.2	1,123.5	62.73	18.909	
10,300.0	7,530.0	8,802.4	7,759.0	56.3	28.0	101.97	-2,523.6	-2,834.9	1,186.2	1,120.8	65.44	18.127	
10,400.0	7,530.0	8,902.4	7,759.0	57.8	28.8	101.97	-2,623.6	-2,834.9	1,186.2	1,118.0	68.24	17.383	
10,500.0	7,530.0	9,002.4	7,759.0	59.2	29.7	101.97	-2,723.6	-2,834.9	1,186.2	1,115.1	71.13	16.678	
10,600.0	7,530.0	9,102.4	7,759.0	60.7	30.7	101.97	-2,823.6	-2,835.0	1,186.2	1,112.2	74.08	16.013	
10,700.0	7,530.0	9,202.4	7,759.0	62.2	31.7	101.97	-2,923.6	-2,835.0	1,186.3	1,109.2	77.09	15.387	
10,800.0	7,530.0	9,302.4	7,759.0	63.7	32.8	101.97	-3,023.6	-2,835.0	1,186.3	1,106.1	80.15	14.800	
10,900.0	7,530.0	9,402.4	7,759.0	65.2	33.9	101.97	-3,123.6	-2,835.0	1,186.3	1,103.0	83.26	14.249	
11,000.0	7,530.0	9,502.4	7,759.0	66.7	35.1	101.97	-3,223.6	-2,835.0	1,186.3	1,099.9	86.39	13.732	
11,100.0	7,530.0	9,602.4	7,759.0	68.3	36.3	101.97	-3,323.6	-2,835.0	1,186.3	1,096.8	89.56	13.246	
11,200.0	7,530.0	9,702.4	7,759.0	69.8	37.6	101.97	-3,423.6	-2,835.1	1,186.3	1,093.6	92.75	12.791	
11,300.0	7,530.0	9,802.4	7,759.0	71.4	38.9	101.97	-3,523.6	-2,835.1	1,186.4	1,090.4	95.97	12.362	
11,400.0	7,530.0	9,902.4	7,759.0	72.9	40.3	101.97	-3,623.6	-2,835.1	1,186.4	1,087.2	99.20	11.960	
11,500.0	7,530.0	10,002.4	7,759.0	74.5	41.7	101.97	-3,723.6	-2,835.1	1,186.4	1,083.9	102.45	11.580	
11,600.0	7,530.0	10,102.4	7,759.0	76.1	43.1	101.97	-3,823.6	-2,835.1	1,186.4	1,080.7	105.72	11.223	
11,700.0	7,530.0	10,202.4	7,759.0	77.7	44.5	101.97	-3,923.6	-2,835.1	1,186.4	1,077.4	108.99	10.885	
11,800.0	7,530.0	10,302.4	7,759.0	79.3	46.0	101.97	-4,023.6	-2,835.1	1,186.4	1,074.2	112.28	10.566	
11,900.0	7,530.0	10,402.4	7,759.0	80.9	47.5	101.97	-4,123.6	-2,835.2	1,186.5	1,070.9	115.58	10.265	
12,000.0	7,530.0	10,502.4	7,759.0	82.5	48.9	101.97	-4,223.6	-2,835.2	1,186.5	1,067.6	118.89	9.979	
12,100.0	7,530.0	10,602.4	7,759.0	84.1	50.5	101.97	-4,323.6	-2,835.2	1,186.5	1,064.3	122.21	9.708	
12,200.0	7,530.0	10,702.4	7,759.0	85.7	52.0	101.97	-4,423.6	-2,835.2	1,186.5	1,061.0	125.54	9.451	
12,300.0	7,530.0	10,802.4	7,759.0	87.3	53.5	101.97	-4,523.6	-2,835.2	1,186.5	1,057.6	128.87	9.207	
12,400.0	7,530.0	10,902.4	7,759.0	89.0	55.1	101.97	-4,623.6	-2,835.2	1,186.5	1,054.3	132.21	8.975	
12,500.0	7,530.0	11,002.4	7,759.0	90.6	56.7	101.97	-4,723.6	-2,835.3	1,186.5	1,051.0	135.55	8.753	
12,600.0	7,530.0	11,102.4	7,759.0	92.2	58.2	101.97	-4,823.6	-2,835.3	1,186.6	1,047.7	138.90	8.542	
12,700.0	7,530.0	11,202.4	7,759.0	93.9	59.8	101.97	-4,923.6	-2,835.3	1,186.6	1,044.3	142.26	8.341	
12,800.0	7,530.0	11,302.4	7,759.0	95.5	61.4	101.97	-5,023.6	-2,835.3	1,186.6	1,041.0	145.62	8.149	
12,900.0	7,530.0	11,402.4	7,759.0	97.2	63.0	101.96	-5,123.6	-2,835.3	1,186.6	1,037.6	148.98	7.965	
13,000.0	7,530.0	11,502.4	7,759.0	98.8	64.6	101.96	-5,223.6	-2,835.3	1,186.6	1,034.3	152.34	7.789	
13,100.0	7,530.0	11,602.4	7,759.0	100.5	66.2	101.96	-5,323.6	-2,835.4	1,186.6	1,030.9	155.71	7.621	
13,200.0	7,530.0	11,702.4	7,759.0	102.1	67.9	101.96	-5,423.6	-2,835.4	1,186.7	1,027.6	159.09	7.459	
13,300.0	7,530.0	11,802.4	7,759.0	103.8	69.5	101.96	-5,523.6	-2,835.4	1,186.7	1,024.2	162.46	7.304	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Sosa 2F-7H-E168 - HZ - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
13,400.0	7,530.0	11,902.4	7,759.0	105.5	71.1	101.96	-5,623.6	-2,835.4	1,186.7	1,020.9	165.84	7.156	
13,500.0	7,530.0	12,002.4	7,759.0	107.1	72.8	101.96	-5,723.6	-2,835.4	1,186.7	1,017.5	169.22	7.013	
13,600.0	7,530.0	12,102.4	7,759.0	108.8	74.4	101.96	-5,823.6	-2,835.4	1,186.7	1,014.1	172.60	6.875	
13,700.0	7,530.0	12,202.4	7,759.0	110.5	76.1	101.96	-5,923.6	-2,835.5	1,186.7	1,010.8	175.99	6.743	
13,800.0	7,530.0	12,302.4	7,759.0	112.2	77.7	101.96	-6,023.6	-2,835.5	1,186.8	1,007.4	179.38	6.616	
13,900.0	7,530.0	12,402.4	7,759.0	113.9	79.4	101.96	-6,123.6	-2,835.5	1,186.8	1,004.0	182.76	6.493	
14,000.0	7,530.0	12,502.4	7,759.0	115.5	81.1	101.96	-6,223.6	-2,835.5	1,186.8	1,000.6	186.15	6.375	
14,100.0	7,530.0	12,602.4	7,759.0	117.2	82.7	101.96	-6,323.6	-2,835.5	1,186.8	997.3	189.55	6.261	
14,200.0	7,530.0	12,702.4	7,759.0	118.9	84.4	101.96	-6,423.6	-2,835.5	1,186.8	993.9	192.94	6.151	
14,300.0	7,530.0	12,802.4	7,759.0	120.6	86.1	101.96	-6,523.6	-2,835.6	1,186.8	990.5	196.34	6.045	
14,400.0	7,530.0	12,902.4	7,759.0	122.3	87.8	101.96	-6,623.6	-2,835.6	1,186.8	987.1	199.73	5.942	
14,500.0	7,530.0	13,002.4	7,759.0	124.0	89.5	101.96	-6,723.6	-2,835.6	1,186.9	983.7	203.13	5.843	
14,600.0	7,530.0	13,102.4	7,759.0	125.7	91.1	101.96	-6,823.6	-2,835.6	1,186.9	980.3	206.53	5.747	
14,700.0	7,530.0	13,202.4	7,759.0	127.4	92.8	101.96	-6,923.6	-2,835.6	1,186.9	977.0	209.93	5.654	
14,800.0	7,530.0	13,302.4	7,759.0	129.1	94.5	101.96	-7,023.6	-2,835.6	1,186.9	973.6	213.33	5.564	
14,900.0	7,530.0	13,402.4	7,759.0	130.8	96.2	101.96	-7,123.6	-2,835.7	1,186.9	970.2	216.74	5.476	
15,000.0	7,530.0	13,502.4	7,759.0	132.5	97.9	101.96	-7,223.6	-2,835.7	1,186.9	966.8	220.14	5.392	
15,100.0	7,530.0	13,602.4	7,759.0	134.2	99.6	101.96	-7,323.6	-2,835.7	1,187.0	963.4	223.55	5.310	
15,200.0	7,530.0	13,702.4	7,759.0	135.9	101.3	101.96	-7,423.6	-2,835.7	1,187.0	960.0	226.95	5.230	
15,300.0	7,530.0	13,802.4	7,759.0	137.6	103.0	101.96	-7,523.6	-2,835.7	1,187.0	956.6	230.36	5.153	
15,400.0	7,530.0	13,902.4	7,759.0	139.3	104.7	101.96	-7,623.6	-2,835.7	1,187.0	953.2	233.77	5.078	
15,500.0	7,530.0	14,002.4	7,759.0	141.0	106.4	101.96	-7,723.6	-2,835.7	1,187.0	949.8	237.17	5.005	
15,600.0	7,530.0	14,102.4	7,759.0	142.7	108.1	101.96	-7,823.6	-2,835.8	1,187.0	946.5	240.58	4.934	
15,700.0	7,530.0	14,202.4	7,759.0	144.4	109.8	101.96	-7,923.6	-2,835.8	1,187.1	943.1	243.99	4.865	
15,800.0	7,530.0	14,302.4	7,759.0	146.1	111.5	101.96	-8,023.6	-2,835.8	1,187.1	939.7	247.40	4.798	
15,900.0	7,530.0	14,402.4	7,759.0	147.8	113.2	101.96	-8,123.6	-2,835.8	1,187.1	936.3	250.81	4.733	
16,000.0	7,530.0	14,502.4	7,759.0	149.5	114.9	101.96	-8,223.6	-2,835.8	1,187.1	932.9	254.23	4.669	
16,100.0	7,530.0	14,602.4	7,759.0	151.2	116.7	101.96	-8,323.6	-2,835.8	1,187.1	929.5	257.64	4.608	
16,200.0	7,530.0	14,702.4	7,759.0	153.0	118.4	101.96	-8,423.6	-2,835.9	1,187.1	926.1	261.05	4.548	
16,300.0	7,530.0	14,802.4	7,759.0	154.7	120.1	101.96	-8,523.6	-2,835.9	1,187.2	922.7	264.47	4.489	
16,400.0	7,530.0	14,902.4	7,759.0	156.4	121.8	101.96	-8,623.6	-2,835.9	1,187.2	919.3	267.88	4.432	
16,500.0	7,530.0	15,002.4	7,759.0	158.1	123.5	101.96	-8,723.6	-2,835.9	1,187.2	915.9	271.29	4.376	
16,600.0	7,530.0	15,102.4	7,759.0	159.8	125.2	101.96	-8,823.6	-2,835.9	1,187.2	912.5	274.71	4.322	
16,700.0	7,530.0	15,202.4	7,759.0	161.5	127.0	101.96	-8,923.6	-2,835.9	1,187.2	909.1	278.12	4.269	
16,800.0	7,530.0	15,302.4	7,759.0	163.3	128.7	101.96	-9,023.6	-2,836.0	1,187.2	905.7	281.54	4.217	
16,900.0	7,530.0	15,402.4	7,759.0	165.0	130.4	101.96	-9,123.6	-2,836.0	1,187.2	902.3	284.96	4.166	
17,000.0	7,530.0	15,502.4	7,759.0	166.7	132.1	101.96	-9,223.6	-2,836.0	1,187.3	898.9	288.37	4.117	
17,100.0	7,530.0	15,602.4	7,759.0	168.4	133.8	101.96	-9,323.6	-2,836.0	1,187.3	895.5	291.79	4.069	
17,200.0	7,530.0	15,702.4	7,759.0	170.1	135.6	101.96	-9,423.6	-2,836.0	1,187.3	892.1	295.21	4.022	
17,300.0	7,530.0	15,802.4	7,759.0	171.9	137.3	101.96	-9,523.6	-2,836.0	1,187.3	888.7	298.63	3.976	
17,400.0	7,530.0	15,902.4	7,759.0	173.6	139.0	101.96	-9,623.6	-2,836.1	1,187.3	885.3	302.04	3.931	
17,500.0	7,530.0	16,002.4	7,759.0	175.3	140.7	101.96	-9,723.6	-2,836.1	1,187.3	881.9	305.46	3.887	
17,550.6	7,530.0	16,052.9	7,759.0	176.2	141.6	101.96	-9,774.2	-2,836.1	1,187.3	880.2	307.19	3.865	
17,589.7	7,530.0	16,087.8	7,759.0	176.9	142.2	101.96	-9,809.1	-2,836.1	1,187.4	878.9	308.46	3.849	ES, SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Sosa 2G-7H-E168 - HZ - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
7,950.0	7,503.2	7,526.3	7,347.8	33.2	30.5	60.12	-1,384.3	-2,576.0	1,517.6	1,490.9	26.68	56.876	
8,000.0	7,514.9	7,550.0	7,370.0	33.4	30.6	66.25	-1,391.0	-2,571.1	1,478.8	1,450.5	28.38	52.112	
8,050.0	7,523.3	7,550.0	7,370.0	33.6	30.6	71.39	-1,391.0	-2,571.1	1,439.8	1,410.0	29.81	48.304	
8,100.0	7,528.3	7,550.0	7,370.0	33.8	30.6	76.32	-1,391.0	-2,571.1	1,401.2	1,370.3	30.94	45.288	
8,149.7	7,530.0	7,550.0	7,370.0	34.0	30.6	80.94	-1,391.0	-2,571.1	1,363.7	1,332.0	31.67	43.055	
8,200.0	7,530.0	7,550.0	7,370.0	34.2	30.6	80.94	-1,391.0	-2,571.1	1,326.6	1,294.4	32.14	41.271	
8,300.0	7,530.0	7,570.6	7,389.0	34.7	30.6	82.09	-1,397.6	-2,566.9	1,255.1	1,221.9	33.18	37.822	
8,400.0	7,530.0	7,584.4	7,401.6	35.3	30.6	82.86	-1,402.4	-2,564.1	1,187.5	1,153.1	34.33	34.589	
8,500.0	7,530.0	7,600.0	7,415.8	35.9	30.7	83.74	-1,408.3	-2,561.0	1,124.2	1,088.6	35.57	31.607	
8,600.0	7,530.0	7,618.2	7,432.0	36.6	30.7	84.76	-1,415.6	-2,557.3	1,065.9	1,029.0	36.86	28.914	
8,700.0	7,530.0	7,650.0	7,459.9	37.4	30.7	86.53	-1,429.6	-2,551.2	1,013.5	975.3	38.20	26.529	
8,800.0	7,530.0	7,663.8	7,471.8	38.3	30.7	87.30	-1,436.2	-2,548.5	967.3	927.7	39.60	24.426	
8,900.0	7,530.0	7,700.0	7,502.1	39.2	30.8	89.28	-1,454.7	-2,541.8	928.4	887.4	40.98	22.656	
9,000.0	7,530.0	7,727.6	7,524.4	40.1	30.8	90.75	-1,470.2	-2,536.9	896.9	854.6	42.38	21.166	
9,100.0	7,530.0	7,769.4	7,556.7	41.2	30.8	92.93	-1,495.7	-2,529.7	873.4	829.7	43.71	19.980	
9,200.0	7,530.0	7,820.1	7,593.4	42.2	30.8	95.42	-1,529.8	-2,521.6	857.4	812.5	44.96	19.069	
9,300.0	7,530.0	7,881.8	7,633.8	43.3	30.8	98.20	-1,575.4	-2,512.6	848.3	802.2	46.10	18.402	
9,400.0	7,530.0	7,956.5	7,675.9	44.5	30.8	101.12	-1,636.3	-2,503.2	844.7	797.6	47.11	17.929	
9,448.2	7,530.0	7,997.5	7,695.7	45.1	30.8	102.50	-1,672.0	-2,498.9	844.4	796.8	47.58	17.747	CC
9,500.0	7,530.0	8,045.3	7,715.5	45.7	30.8	103.87	-1,715.3	-2,494.5	844.7	796.6	48.08	17.567	
9,600.0	7,530.0	8,147.3	7,745.7	46.9	30.8	105.96	-1,812.4	-2,487.8	846.0	796.8	49.19	17.199	
9,700.0	7,530.0	8,258.0	7,758.8	48.2	30.9	106.87	-1,922.0	-2,484.9	846.9	796.2	50.68	16.709	
9,800.0	7,530.0	8,359.7	7,759.0	49.5	31.0	106.89	-2,023.7	-2,484.9	846.9	794.3	52.57	16.109	
9,900.0	7,530.0	8,459.7	7,759.0	50.8	31.2	106.89	-2,123.7	-2,484.9	846.9	792.3	54.63	15.502	
10,000.0	7,530.0	8,559.7	7,759.0	52.2	31.5	106.89	-2,223.7	-2,484.9	846.9	790.1	56.86	14.895	
10,100.0	7,530.0	8,659.7	7,759.0	53.5	31.9	106.89	-2,323.7	-2,484.9	846.9	787.7	59.24	14.297	
10,200.0	7,530.0	8,759.7	7,759.0	54.9	32.4	106.89	-2,423.7	-2,484.9	846.9	785.2	61.75	13.715	
10,300.0	7,530.0	8,859.7	7,759.0	56.3	33.0	106.88	-2,523.7	-2,484.9	847.0	782.6	64.38	13.155	
10,400.0	7,530.0	8,959.7	7,759.0	57.8	33.7	106.88	-2,623.7	-2,485.0	847.0	779.9	67.11	12.622	
10,500.0	7,530.0	9,059.7	7,759.0	59.2	34.4	106.88	-2,723.7	-2,485.0	847.0	777.1	69.91	12.115	
10,600.0	7,530.0	9,159.7	7,759.0	60.7	35.2	106.88	-2,823.7	-2,485.0	847.0	774.2	72.78	11.637	
10,700.0	7,530.0	9,259.7	7,759.0	62.2	36.1	106.88	-2,923.7	-2,485.0	847.0	771.3	75.71	11.187	
10,800.0	7,530.0	9,359.7	7,759.0	63.7	37.0	106.88	-3,023.7	-2,485.0	847.0	768.3	78.69	10.764	
10,900.0	7,530.0	9,459.7	7,759.0	65.2	38.0	106.88	-3,123.7	-2,485.0	847.1	765.3	81.72	10.366	
11,000.0	7,530.0	9,559.7	7,759.0	66.7	39.1	106.88	-3,223.7	-2,485.1	847.1	762.3	84.77	9.992	
11,100.0	7,530.0	9,659.7	7,759.0	68.3	40.2	106.88	-3,323.7	-2,485.1	847.1	759.2	87.86	9.641	
11,200.0	7,530.0	9,759.7	7,759.0	69.8	41.3	106.88	-3,423.7	-2,485.1	847.1	756.1	90.97	9.312	
11,300.0	7,530.0	9,859.7	7,759.0	71.4	42.5	106.88	-3,523.7	-2,485.1	847.1	753.0	94.11	9.001	
11,400.0	7,530.0	9,959.7	7,759.0	72.9	43.8	106.88	-3,623.7	-2,485.1	847.1	749.9	97.26	8.710	
11,500.0	7,530.0	10,059.7	7,759.0	74.5	45.0	106.88	-3,723.7	-2,485.1	847.1	746.7	100.44	8.435	
11,600.0	7,530.0	10,159.7	7,759.0	76.1	46.3	106.88	-3,823.7	-2,485.2	847.2	743.5	103.63	8.175	
11,700.0	7,530.0	10,259.7	7,759.0	77.7	47.6	106.88	-3,923.7	-2,485.2	847.2	740.4	106.83	7.930	
11,800.0	7,530.0	10,359.7	7,759.0	79.3	49.0	106.88	-4,023.7	-2,485.2	847.2	737.2	110.04	7.699	
11,900.0	7,530.0	10,459.7	7,759.0	80.9	50.4	106.88	-4,123.7	-2,485.2	847.2	733.9	113.26	7.480	
12,000.0	7,530.0	10,559.7	7,759.0	82.5	51.8	106.88	-4,223.7	-2,485.2	847.2	730.7	116.50	7.272	
12,100.0	7,530.0	10,659.7	7,759.0	84.1	53.2	106.88	-4,323.7	-2,485.2	847.2	727.5	119.74	7.076	
12,200.0	7,530.0	10,759.7	7,759.0	85.7	54.7	106.88	-4,423.7	-2,485.3	847.3	724.3	122.99	6.889	
12,300.0	7,530.0	10,859.7	7,759.0	87.3	56.1	106.88	-4,523.7	-2,485.3	847.3	721.0	126.25	6.711	
12,400.0	7,530.0	10,959.7	7,759.0	89.0	57.6	106.88	-4,623.7	-2,485.3	847.3	717.8	129.51	6.542	
12,500.0	7,530.0	11,059.7	7,759.0	90.6	59.1	106.88	-4,723.7	-2,485.3	847.3	714.5	132.78	6.381	
12,600.0	7,530.0	11,159.7	7,759.0	92.2	60.6	106.88	-4,823.7	-2,485.3	847.3	711.3	136.05	6.228	
12,700.0	7,530.0	11,259.7	7,759.0	93.9	62.1	106.88	-4,923.7	-2,485.3	847.3	708.0	139.33	6.081	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Sosa 2G-7H-E168 - HZ - Plan #1

Offset Site Error: 0.0 ft

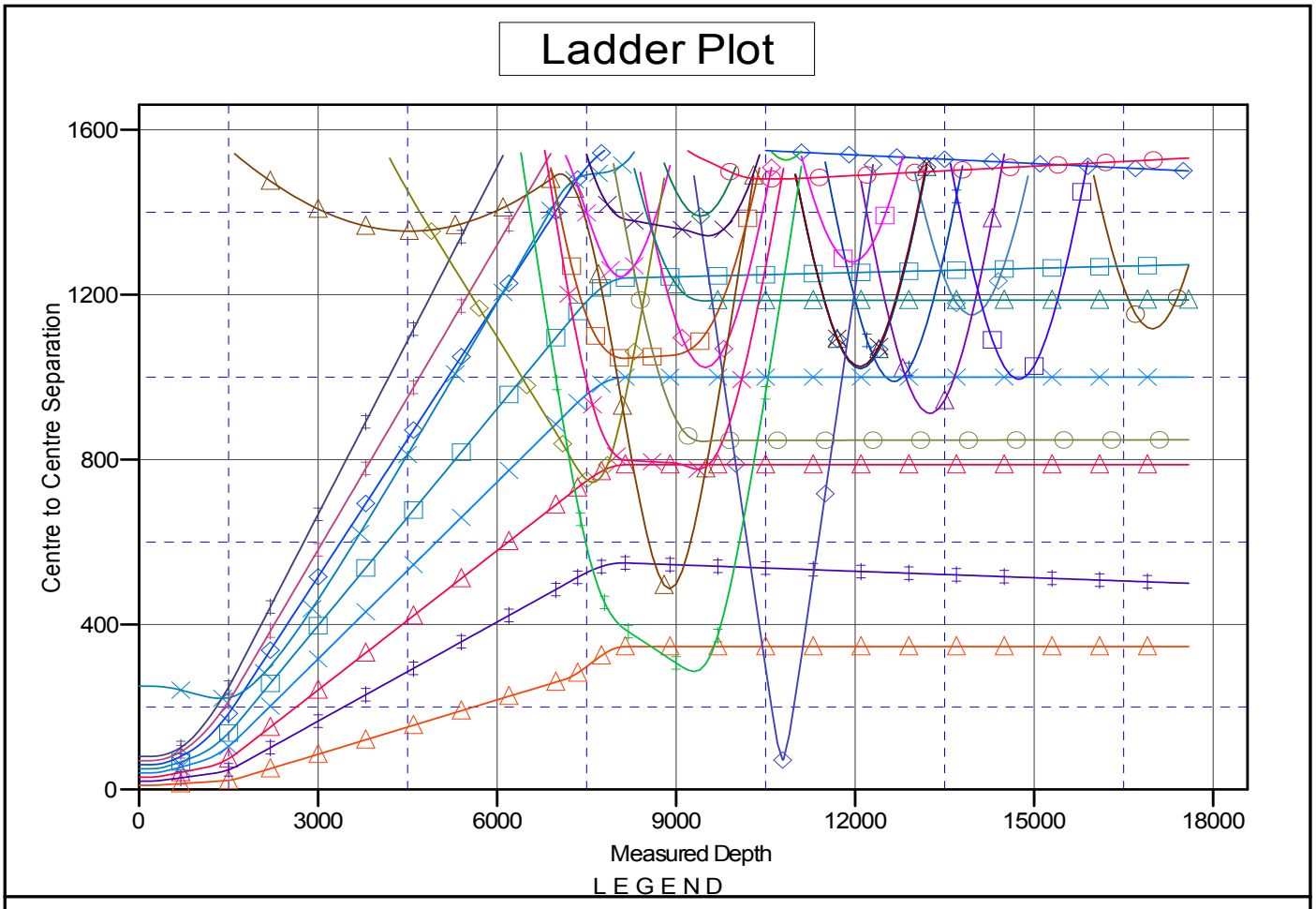
Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
12,800.0	7,530.0	11,359.7	7,759.0	95.5	63.7	106.88	-5,023.7	-2,485.4	847.4	704.7	142.61	5.942	
12,900.0	7,530.0	11,459.7	7,759.0	97.2	65.2	106.88	-5,123.7	-2,485.4	847.4	701.5	145.90	5.808	
13,000.0	7,530.0	11,559.7	7,759.0	98.8	66.8	106.88	-5,223.7	-2,485.4	847.4	698.2	149.19	5.680	
13,100.0	7,530.0	11,659.7	7,759.0	100.5	68.3	106.88	-5,323.7	-2,485.4	847.4	694.9	152.49	5.557	
13,200.0	7,530.0	11,759.7	7,759.0	102.1	69.9	106.88	-5,423.7	-2,485.4	847.4	691.6	155.78	5.440	
13,300.0	7,530.0	11,859.7	7,759.0	103.8	71.5	106.88	-5,523.7	-2,485.4	847.4	688.3	159.08	5.327	
13,400.0	7,530.0	11,959.7	7,759.0	105.5	73.1	106.88	-5,623.7	-2,485.4	847.4	685.1	162.39	5.219	
13,500.0	7,530.0	12,059.7	7,759.0	107.1	74.7	106.87	-5,723.7	-2,485.5	847.5	681.8	165.69	5.115	
13,600.0	7,530.0	12,159.7	7,759.0	108.8	76.3	106.87	-5,823.7	-2,485.5	847.5	678.5	169.00	5.015	
13,700.0	7,530.0	12,259.7	7,759.0	110.5	77.9	106.87	-5,923.7	-2,485.5	847.5	675.2	172.31	4.918	
13,800.0	7,530.0	12,359.7	7,759.0	112.2	79.5	106.87	-6,023.7	-2,485.5	847.5	671.9	175.62	4.826	
13,900.0	7,530.0	12,459.7	7,759.0	113.9	81.1	106.87	-6,123.7	-2,485.5	847.5	668.6	178.94	4.736	
14,000.0	7,530.0	12,559.7	7,759.0	115.5	82.8	106.87	-6,223.7	-2,485.5	847.5	665.3	182.26	4.650	
14,100.0	7,530.0	12,659.7	7,759.0	117.2	84.4	106.87	-6,323.7	-2,485.6	847.6	662.0	185.57	4.567	
14,200.0	7,530.0	12,759.7	7,759.0	118.9	86.0	106.87	-6,423.7	-2,485.6	847.6	658.7	188.89	4.487	
14,300.0	7,530.0	12,859.7	7,759.0	120.6	87.7	106.87	-6,523.7	-2,485.6	847.6	655.4	192.21	4.410	
14,400.0	7,530.0	12,959.7	7,759.0	122.3	89.3	106.87	-6,623.7	-2,485.6	847.6	652.1	195.54	4.335	
14,500.0	7,530.0	13,059.7	7,759.0	124.0	91.0	106.87	-6,723.7	-2,485.6	847.6	648.8	198.86	4.262	
14,600.0	7,530.0	13,159.7	7,759.0	125.7	92.6	106.87	-6,823.7	-2,485.6	847.6	645.4	202.19	4.192	
14,700.0	7,530.0	13,259.7	7,759.0	127.4	94.3	106.87	-6,923.7	-2,485.7	847.6	642.1	205.51	4.125	
14,800.0	7,530.0	13,359.7	7,759.0	129.1	95.9	106.87	-7,023.7	-2,485.7	847.7	638.8	208.84	4.059	
14,900.0	7,530.0	13,459.7	7,759.0	130.8	97.6	106.87	-7,123.7	-2,485.7	847.7	635.5	212.17	3.995	
15,000.0	7,530.0	13,559.7	7,759.0	132.5	99.3	106.87	-7,223.7	-2,485.7	847.7	632.2	215.50	3.934	
15,100.0	7,530.0	13,659.7	7,759.0	134.2	101.0	106.87	-7,323.7	-2,485.7	847.7	628.9	218.83	3.874	
15,200.0	7,530.0	13,759.7	7,759.0	135.9	102.6	106.87	-7,423.7	-2,485.7	847.7	625.6	222.16	3.816	
15,300.0	7,530.0	13,859.7	7,759.0	137.6	104.3	106.87	-7,523.7	-2,485.8	847.7	622.2	225.49	3.759	
15,400.0	7,530.0	13,959.7	7,759.0	139.3	106.0	106.87	-7,623.7	-2,485.8	847.8	618.9	228.83	3.705	
15,500.0	7,530.0	14,059.7	7,759.0	141.0	107.7	106.87	-7,723.7	-2,485.8	847.8	615.6	232.16	3.652	
15,600.0	7,530.0	14,159.7	7,759.0	142.7	109.4	106.87	-7,823.7	-2,485.8	847.8	612.3	235.50	3.600	
15,700.0	7,530.0	14,259.7	7,759.0	144.4	111.0	106.87	-7,923.7	-2,485.8	847.8	609.0	238.83	3.550	
15,800.0	7,530.0	14,359.7	7,759.0	146.1	112.7	106.87	-8,023.7	-2,485.8	847.8	605.6	242.17	3.501	
15,900.0	7,530.0	14,459.7	7,759.0	147.8	114.4	106.87	-8,123.7	-2,485.9	847.8	602.3	245.51	3.453	
16,000.0	7,530.0	14,559.7	7,759.0	149.5	116.1	106.87	-8,223.7	-2,485.9	847.8	599.0	248.84	3.407	
16,100.0	7,530.0	14,659.7	7,759.0	151.2	117.8	106.87	-8,323.7	-2,485.9	847.9	595.7	252.18	3.362	
16,200.0	7,530.0	14,759.7	7,759.0	153.0	119.5	106.87	-8,423.7	-2,485.9	847.9	592.4	255.52	3.318	
16,300.0	7,530.0	14,859.7	7,759.0	154.7	121.2	106.87	-8,523.7	-2,485.9	847.9	589.0	258.86	3.275	
16,400.0	7,530.0	14,959.7	7,759.0	156.4	122.9	106.87	-8,623.7	-2,485.9	847.9	585.7	262.20	3.234	
16,500.0	7,530.0	15,059.7	7,759.0	158.1	124.6	106.87	-8,723.7	-2,485.9	847.9	582.4	265.54	3.193	
16,600.0	7,530.0	15,159.7	7,759.0	159.8	126.3	106.86	-8,823.7	-2,486.0	847.9	579.1	268.88	3.154	
16,700.0	7,530.0	15,259.7	7,759.0	161.5	128.0	106.86	-8,923.7	-2,486.0	848.0	575.7	272.23	3.115	
16,800.0	7,530.0	15,359.7	7,759.0	163.3	129.7	106.86	-9,023.7	-2,486.0	848.0	572.4	275.57	3.077	
16,900.0	7,530.0	15,459.7	7,759.0	165.0	131.4	106.86	-9,123.7	-2,486.0	848.0	569.1	278.91	3.040	
17,000.0	7,530.0	15,559.7	7,759.0	166.7	133.1	106.86	-9,223.7	-2,486.0	848.0	565.7	282.25	3.004	
17,100.0	7,530.0	15,659.7	7,759.0	168.4	134.8	106.86	-9,323.7	-2,486.0	848.0	562.4	285.60	2.969	
17,200.0	7,530.0	15,759.7	7,759.0	170.1	136.5	106.86	-9,423.7	-2,486.1	848.0	559.1	288.94	2.935	
17,300.0	7,530.0	15,859.7	7,759.0	171.9	138.2	106.86	-9,523.7	-2,486.1	848.0	555.8	292.29	2.901	
17,400.0	7,530.0	15,959.7	7,759.0	173.6	140.0	106.86	-9,623.7	-2,486.1	848.1	552.4	295.63	2.869	
17,500.0	7,530.0	16,059.7	7,759.0	175.3	141.7	106.86	-9,723.7	-2,486.1	848.1	549.1	298.98	2.837	
17,543.1	7,530.0	16,102.7	7,759.0	176.1	142.4	106.86	-9,766.8	-2,486.1	848.1	547.7	300.42	2.823	
17,589.7	7,530.0	16,148.7	7,759.0	176.9	143.2	106.86	-9,812.8	-2,486.1	848.1	546.1	301.97	2.809	ES, SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1A-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1A-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to WELL @ 5036.0ft	Coordinates are relative to: Morgan Hills 1A-7H-A168
Offset Depths are relative to Offset Datum	Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is -105.500000 °	Grid Convergence at Surface is: 0.30°



NG), ENCANA WELL, PLAN ONLY V0	Sosa 21-18, DD (MWD), DD V0	WOOLLEY 41-7 (EXISTING), ENCAN
1, ENCANA WELL, NO SURVEYS V0	Sosa 22-18, DD, DD V0	WOOLLEY 42-7 ENCANA (EXISTING
2, ENCANA WELL, NO SURVEYS V0	THOMAS 24-7 (Existing), Existing, NO SURVEYS V0	WOOLLEY A 1-7 (EXISTING), ENCAN
3, HZ, Plan #2 V0	THOMAS 24-7 (EXISTING), ENCANA WELL, Plan #1 V0	Woolley-Becky 2E-7H-E168, Hz, Plan #
3, HZ, Plan #2 V0	THOMAS 24-7 (EXISTING), ENCANA WELL, Plan #2 V0	Woolley-Becky 2F-7H-E168, Hz, Plan #
3, HZ, Plan #2 V0	THOMAS 24-7 (EXISTING), ENCANA WELL, SURVEYS V0	Woolley-Becky 2G-7H-E168, Hz, Plan #
3, HZ, Plan #2 V0	THOMAS 33-7 (EXISTING), ENCANA WELL, SURVEYS V0	Woolley-Becky 2H-7H-E168, Hz, Plan #
3, HZ, Plan #2 V0	THOMAS E UNIT 1 (EXISTING), Existing, NO SURVEYS V0	Woolley-Sosa 2E-7H-E168, HZ, Plan #
8, HZ, Plan #2 V0	WOOLLEY 21-7 (EXISTING), ENCANA WELL, GYRO V0	Woolley-Sosa 2F-7H-E168, HZ, Plan #
3, HZ, Plan #2 V0	WOOLLEY 22-7 (EXISTING), ENCANA WELL, SURVEYS V0	Woolley-Sosa 2G-7H-E168, HZ, Plan #